TopModel review part 2

The best-selling RISC OS magazine in the world

# ACORN USER



# Digital Cameras

## Say goodbye to film forever

**Plus**

- Noticeboard Pro
- Composition
- VNC on RISC OS
- Photodesk plug-ins

NO DISC THIS MONTH!

See page 19 for more details

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December 1999

ACORN USER

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**Next month**

RISC OS '99 Show Report, ArtWorks plug-ins, ParaFS, Internet data logging and on-the-fly gif creation, digital projection, and a beginners guide to Draw.

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## 0% Interest FREE credit (6 months) or LOW cost finance available on all new systems.

6 months Interest Free Credit On All Systems inc peripherals, software and 2/3 yr optional warranties (minimum spend £800 inc Vat)

## neTWORX RiscStation Risc Based Technologies — RiscStation R7500



Networx 50 mip Arm7500 system with built in Midi, sound sampler, 10baseT network port, High speed serial & parrallel ports, RISCOS 4

Major Software Bundle

| | |
|---|---|
| Networx base only | £399 + Vat (£468.83) |
| Networx 14" system | £479 + Vat (£562.83) |
| Networx 15" system | £499 + Vat (£586.33) |
| Networx 17" system | £549 + Vat (£645.08) |

See www.riscstation.co.uk for more details



R7500 50 *Lite* 50 mip system with Midi, sound sampler, 10baseT network port, High speed serial & parrallel ports, RISC OS 4

Major Software Bundle

| | |
|---|---|
| Base only | £499 + Vat (£586.33) |
| 14" monitor system | £579 + Vat (£680.33) |
| 15" monitor system | £599 + Vat (£703.83) |
| 17" monitor system | £649 + Vat (£762.58) |

See www.riscstation.co.uk for more details

## SA233"T" Web Wizard

34Mb/8G/DvdCD/17" mon/Stereo Spk, Ant Internet & Jarva with a 56K modem for only



**£1145 + VAT**

(includes RiscOS 4)

*On L.C.F. for only £34.00 per month*

## 233Mhz SA RiscPC Offers

RPC SA bases from £850 inc VAT or £22.00/month via L.C.F. * AND we will match or beat your best offer

**We can supply any combination or configutration you require.**

## A7000 + Series Machines

A7000+ Classic 29 Mips RO3.7 8M / 1G HD /no CD £449.00 (£527.58)

A7000+ Classic 29 Mips RO3.7 16M / 2G HD /24x CD £499.00 (£586.33)

A7000+ Odyssey NETWORK 50 Mips RO3.7 (4.0) 16M £525.00 (£616.88)

A7000+ Odyssey CD 50 Mips RO3.7 (4.0) 16M / 4G HD / 40x CD £549.00 (£645.08)

A7000+ Odyssey Primary or Sec. Pack 50 Mips RO3.7 (4.0) 16M / 4G HD / 40x CD £599.00 (£703.83)

A7000 + Odyssey Surf 50 Mips RO3.7 (4.0) 16M / 4G HD / DVD £699.00 (£821.33)

*Above prices do not include monitors see seperate price list*

## RISC OS 4



**£99.00 +vat** (£116.33) **place your order now**

Fitting & data transfer, if required, £25 inc vat (£15 with new HD).

**Stock Available NOW**

## Show Specials

**A3000/A3010 170mb HD & I/F**
**£69 + Vat (£81.08)**

**A300/A400 200mb HD & I/F**
**£59 + Vat (£69.33)**
(hard drive mounts extra)

(Above offers available while special stocks last )

## HARD DRIVES AND SUB-SYSTEMS *WHY PAY MORE???*

| A3000/A3010 | Ex. VAT | Inc. VAT |
|---|---|---|
| 170Mb | £85 | £99.88 |
| 340Mb | £99 | £116.33 |
| 512Mb | £115 | £135.13 |
| 810Mb | £125 | £146.88 |
| 1Gb | £135 | £158.63 |
| 2Gb | £150 | £176.25 |
| 3Gb | £155 | £182.13 |
| 4Gb | £175 | £205.63 |

| A3020 | Ex. VAT | Inc. VAT |
|---|---|---|
| 170Mb | £49 | £57.58 |
| 340Mb | £65 | £76.38 |
| 512Mb | £79 | £92.83 |
| 810Mb | # £99 | £116.33 |
| 1Gb | # £109 | £128.08 |
| 2Gb | # £125 | £146.88 |
| 3Gb | # £130 | £152.75 |
| 4Gb | # £149 | £175.08 |

A3000/A3010 version includes CD ROM i/f which can also be used in A3020 or A4000. For external A3000 i/f add £20.00 +VAT
# includes partitioning software

| A4000/A5000/A400 | Ex. VAT | Inc. VAT |
|---|---|---|
| 210Mb refurb | £25 | £29.38 |
| 420Mb | £40 | £47.00 |
| 540Mb | £49 | £57.58 |
| 730Mb * | £80 | £94.00 |
| 1.2Gb * | £95 | £111.63 |
| 2.1Gb * | £100 | £117.50 |
| 3.2Gb * | £105 | £123.38 |
| 4.0Gb * | £115 | £135.13 |

* inc. internal removable HD & CD ROM i/f.
For partitioning software only deduct £25.00 + vat (£29.38)

| RPC / A7000 / RiscStation | Ex. VAT | Inc. VAT |
|---|---|---|
| 2.1Gb | £60 | £70.50 |
| 4.3Gb | £70 | £82.25 |
| 6.4Gb | £80 | £94.00 |
| 8.4Gb | £89 | £104.58 |
| 16.8Gb * | £115 | £135.13 |
| 20.1Gb * | £145 | £170.38 |
| 25.0Gb * | £185 | £217.38 |
| 36.4Gb * | £285 | £334.88 |

* requires RISCOS 4 or Partitioning software for RISCOS 3.5 / 3.6 / 3.7 only £25.00 + vat (£29.38)

## MONITORS

All monitors inc 3 yrs wty unless specified

| | Ex VAT | Inc VAT |
|---|---|---|
| 14" SVGA 0.28 (3yr on-site) | £79.00 | £92.83 |
| 14" SVGA 0.28 Multi-Media | £99.00 | £116.33 |
| 15" SVGA 0.28 (3yr on-site) | £99.00 | £116.33 |
| 15" SVGA 0.28 Multi-Media | £125.00 | £146.87 |
| 17" SVGA 0.28 (1yr RTB) | £129.00 | £151.57 |
| 17" SVGA 0.28 (3yr on-site) | £149.00 | £175.08 |
| *17" SVGA 0.28 m-media(3yr)* | *£169.00* | *£198.58* |
| 19" SVGA 0.26 (1yr RTB) | £270.00 | £317.25 |
| 19" SVGA 0.26 (3yr on-site) | £329.00 | £386.58 |
| 21" SVGA 0.25 (3yr on-site) | £540.00 | £634.50 |
| 38" SVGA (1yr on-site) | £1450.00 | £1703.75 |
| **15" Iiyama Vision Master 350** | **£125.00** | **£151.27** |
| **17" Iiyama Vision Master FST** | **£235.00** | **£276.13** |
| **17" Iiyama Pro 410** | **£269.00** | **£316.08** |
| **19" Iiyama Pro 450** | **£415.00** | **£487.63** |
| **21" Iiyama Pro Diamondtron** | **£659.00** | **£774.33** |
| AKF53 Multisync 14" 1yrRTB | £160.00 | £188.00 |
| AKF50 Multisync 14" 1yrRTB | £195.00 | £229.13 |
| *AKF12 PAL 14" refurb 90 days* | *£65.00* | *£76.38* |
| *AKF52/53 M/sync refurb 90 days* | *£99.00* | *£116.33* |
| *AKF60 SVGA 14" refurb 90days* | *£65.00* | *£76.38* |
| Multisync A300/A3000 cable | £8.50 | £9.99 |

## THE BEST PRINTER PRICES

( Please ring for latest prices )

| | | Ex VAT | Inc VAT |
|---|---|---|---|
| Canon BJC 1000 colour | A4 | £77.00 | £90.48 |
| Canon BJC 2000 colour # | A4 | £89.00 | £104.58 |
| Canon BJC 2000 Scan #! | A4 | £158.00 | £185.65 |
| Canon BJC 4650 colour # | A3 | £228.00 | £267.90 |
| Canon BJC 4650 Scan #! | A3 | £275.00 | £323.13 |
| Canon BJC 7000 colour # | A4 | £169.00 | £198.58 |
| Epson Stylus 440 colour | A4 | £85.00 | £99.88 |
| Epson Stylus 660 colour | A4 | £116.00 | £136.30 |
| Epson Stylus 850 colour | A4 | £165.00 | £193.87 |
| Epson Stylus 1520 colour | A3 | £350.00 | £411.25 |
| Epson Stylus Photo 700 # | A4 | £135.00 | £158.63 |
| Epson Stylus Photo EX # | A3 | £265.00 | £311.38 |
| HP 610C colour | A4 | £69.00 | £81.08 |
| HP 895CXI colour | A4 | £200.00 | £235.00 |
| HP LASERJET 1100 | | £249.00 | £292.58 |
| HP LASERJET 2100 PCL | | £454.00 | £533.45 |
| HP LASERJET 2100 PS | | £514.00 | £603.95 |
| Photo drivers for # | | £58.72 | £69.00 |
| Scanner drivers for ! | | £29.79 | £35.00 |

***FREE Acorn driver by request***

## ACORN MKII TRACKBALL & MOUSE



**£29.79 + VAT**

## Removable Drives

### IDE Drives

IDE drives require suitable drivers or hardware

| | | |
|---|---|---|
| Zip 100 int | £65.00 | (£76.38) |
| Zip 250 int | £85.00 | (£99.88) |

### Parallel Drives

Parallel drives include Acorn Software

| | | |
|---|---|---|
| Zip 100 | £99.00 | (£116.33) |
| Zip 250 | £159.00 | (£186.83) |
| Jaz 1G | £239.00 | (£280.83) |
| Jaz 2G | £299.00 | (£351.33) |

### SCSI Removable Drives

| | | |
|---|---|---|
| Zip 100M int | £85.00 | (£99.88) |
| Zip 250M ext | £135.00 | (£158.63) |
| PD650/CD | £139.00 | (£163.33) |
| Nomai 750 | £165.00 | (£193.88) |
| Jaz 2G int | £235.00 | (£276.13) |
| Jaz 2G ext | £235.00 | (£276.13) |

## SCSI HARD DRIVES

| | | |
|---|---|---|
| 540Mb # limited supply | £40.00 | (£47.00) |
| 1Gb | £50.00 | (£58.75) |
| 2Gb (5400 rpm) special | £80.00 | (£94.00) |
| 2Gb (7200 rpm) # | £100.00 | (£117.50) |
| 4.3Gb (5400 or 7200rpm) | £140.00 | (£164.50) |
| 9.1Gb (7200rpm) | £196.00 | (£230.30) |
| 18.6Gb (7200 rpm) | £345.00 | (£405.38) |
| 36.4Gb (7200 rpm) | £640.00 | (£752.00) |

For EXT. SCSI I case £50.00 + VAT (inc. cable)
For EXT. SCSI II case £55.00 + VAT (inc. cable)

## CD-ROM WRITERS



Prices Start from £149.00 +

| | | |
|---|---|---|
| 2x2x6x | £149.00 | (£175.08) |
| 6x4x16x | £199.00 | (£233.83) |
| **CD-BURN** | **£49.00** | **(£57.58)** |
| **CD-SCRIBE 2** | **£49.00** | **(£57.58)** |

**6 Drive 40x SCSI CDROM Towers £499** *(£586.33)*



**SCSI 8x Autochanger** £85.00 + vat (£99.88)

## CD-ROMS

| IDE | | | SCSI | | |
|---|---|---|---|---|---|
| 48x | £39.00 | (£45.83) | 40x | £65.00 | (£76.38) |
| 40x | £35.00 | (£41.13) | 32x | £55.00 | (£64.63) |
| 8x | £30.00 | (£35.25) | 8x | £30.00 | (£35.25) |

For external IDE or SCSI 1 add £50.00 + VAT (inc.cable)
For external SCSI II add £55.00 + Vat. (inc. cable)
IDE driver for RiscOS 3.5 £15 + vat
IDE int. fitting kit £5 inc. Int. SCSI fitting kits from £10 + vat

## Removable Drive Media

| | ex VAT | inc VAT |
|---|---|---|
| 100Mb Zip | £8.00 | £9.40 |
| Zip 5 pack | £35.00 | £41.13 |
| 250Mb Zip | £12.76 | £14.99 |
| 120M LS 120 | £7.00 | £8.23 |
| 650Mb PD | £19.00 | £22.33 |
| 750Mb Nomai | £38.00 | £44.65 |
| 1Gb Jazz | £58.00 | £68.15 |
| 2Gb Jazz | £69.00 | £81.08 |
| 1.5Gb Syquest | £58.00 | £68.15 |

| | ex VAT | inc VAT |
|---|---|---|
| 5.2Gb DVD RAM | £25.00 | £29.38 |
| CDR CD-ROM | £1.28 | £1.50 |
| CDR 10 pack | £10.00 | £11.75 |
| CDR 25 pack | £21.28 | £25.00 |
| CDR 80min 10 pck | £12.00 | £14.10 |
| CDR 80min 25 pck | £25.53 | £30.00 |
| CDR/W CD-ROM | £5.00 | £5.88 |
| CDR/W 10 pack | £40.00 | £47.00 |

## Desktop FAX MODEMS

| | | |
|---|---|---|
| 56k x2/V90 3Com USR | £118.30 | £129.00 |
| 56k Flex/V90 (Rockwell) | £55.32 | £65.00 |
| ISDN modem (external) | £99.00 | £116.33 |
| ANT Internet Suite | £94.05 | £110.51 |
| Webster XL | £21.28 | £25.00 |
| !Java CD | £33.19 | £39.00 |
| ArcFax Fax software | £26.38 | £31.00 |

## Interface Adapters

| | | |
|---|---|---|
| EESOX SCSI 32-bit DMA | £84.26 | £99.00 |
| Storm SCSI 8-bit (A30x9 int) | £88.00 | £103.40 |
| Storm SCSI 16-bit (podule) | £96.00 | £112.80 |
| Storm SCSI 32-bit DMA (podule) | £128.00 | £150.40 |
| Powertec SCSI3 32-bit DMA(podule) | £170.00 | £199.75 |
| Simtec 8-bit (A3000/A3010) | £55.00 | £64.63 |
| Simtec 16-bit (AX00/A5000/RPC) | £45.00 | £52.88 |
| APDL 16-bit DMA | £45.00 | £52.88 |
| APDL BlitZ 32-bit DMA | £99.00 | £116.33 |
| Removable IDE or SCSI housing unit | £20.00 | £23.50 |
| High speed serial cards single | £67.23 | £79.00 |
| High speed serial cards dual | £75.75 | £89.00 |
| High speed serial cards triple | £84.26 | £99.00 |

# 3 yr Warranty on ALL Acorn MEMORY why Pay More??

## *High Quality MEMORY* *NEW LOWER PRICES*

| | Ex VAT | Inc VAT |
|---|---|---|
| A310 4Mb Upgrade | *£35 | £41.13 |
| A310 RISC OS carrier board | *£19 | £22.33 |
| A310 MEMC1a upgrade kit | £20 | £23.50 |
| A400/1 1Mb Upgrade (per Mb) | £25 | £29.38 |
| A3000 1-2Mb Non-Upgradeable | £15 | £17.63 |
| A3000 1-4Mb Upgrade | £35 | £41.13 |
| A3000 Serial Port Upgrade | £19 | £22.33 |
| 4-8Mb Up. (A310, 440, 3000*) | £55 | £64.63 |
| A3010 1-2Mb Upgrade | £20 | £23.50 |
| A3010 1-4Mb Upgrade | £45 | £52.88 |
| A3020/4000 2-4Mb Upgrade | £40 | £47.00 |
| A5000 2-4Mb Upgrade | £45 | £52.88 |
| A5000 4-8Mb 25Mz* & 33Mhz | £55 | £64.63 |
| NEW A540 4Mb | £45 | £52.88 |
| FPA10 for A5000 or Arm 3 Card | £45 | £55.88 |
| Replacement VIDC or IOC chips | £20 | £23.50 |
| * rework if required | £25 | £29.38 |

**RiscOS 3.11 Rom upgrades**
£25.00 exc Vat (£29.38)

## *RISC PC MEMORY*

| Also for A7000 | Ex VAT | Inc VAT |
|---|---|---|
| 8Mb SIMM | £10.00 | £11.75 |
| 16Mb SIMM | £20.00 | £23.50 |
| 32Mb SIMM | £42.00 | £49.35 |
| 32Mb high clearance | £53.00 | £62.28 |
| 64Mb SIMM | £85.00 | £99.88 |
| 128Mb SIMM | £160.00 | £188.00 |
| 1Mb VRAM | £29.00 | £34.08 |
| 2Mb VRAM | £73.00 | £85.78 |
| 1-2Mb (exchange) | £63.00 | £74.03 |

**33 Mhz Arm 3 upgrade SPECIAL**

| | | |
|---|---|---|
| with FPA socket | £45.00 | £55.88 inc. |
| FPA 10 (25Mhz) | £84.26 | £99.00 inc. |

RPC 16 bit audio & mixer £59 inc
RPC audio mixer £35 inc

# NETWORKING

## ETHERNET INTERFACES

| | Ex. VAT | Inc VAT |
|---|---|---|
| A3000 int. 10base2 or T, Access+ | £89.00 | £104.58 |
| A400/A5000 10base2 or T Access+ | £89.00 | £104.58 |
| A400/A5000 10base2 & T Access+ | £99.00 | £116.33 |
| A3020 10base2 Access+/ext. MAU | £99.00 | £116.33 |
| A3020 10baseT Access+/etx. MAU | £99.00 | £116.33 |
| Risc PC/A7000 10base2 & T Acc+ | £99.00 | £116.33 |
| Risc PC/A7000 10base2 Access+ | £79.00 | £92.83 |
| Ant Access+ ROM upgrade | £10.00 | £11.75 |

## Network Hubs *(more available)*

| | Ex VAT | Inc VAT |
|---|---|---|
| 8 Port 10 base | £39.00 | £45.83 |
| 8 Port 100 "special" | £125.00 | £146.88 |
| 8 Port 100/10 Auto | £149.00 | £175.08 |
| 18 Port 10 16T+ 2BNC | £75.00 | £88.13 |
| 16 Port 100/10 Auto | £249.00 | £292.58 |
| 16 Port 100/10 Auto (inc 3 port switch) | £299.00 | £351.33 |
| 24 Port 100/10 Auto | £389.00 | £457.08 |
| 24 Port 100 "special" | £349.00 | £410.08 |

## Cables

| | | |
|---|---|---|
| 2M | £3.00 | £3.53 |
| 3M | £5.00 | £5.88 |
| 5M | £6.00 | £7.05 |
| 10M | £10.00 | £11.75 |
| 20M | £15.00 | £17.63 |

State 10base2 or 10baseT
any size made to order

**We supply and / or install all network components please ring for your requirements**

## NETWORKING SOFTWARE

| | | |
|---|---|---|
| Topcat site licence | £489.00 | (£587.50) |
| NTfiler site licence | £97.00 | (£113.98) |
| Omniclient site licence | £489.00 | (£587.50) |
| Lanman98 single user | £35.00 | (£41.13) |
| Win95FS single user | £35.00 | (£41.13) |
| Lanman or Win95FS 10 user site licence | £110.00 | £129.25 |
| Lanman or Win95FS 20 user site licence | £156.00 | £183.30 |

## MICE & KEYBOARDS



High Quality Acorn ERGO Mouse £12.00 (£14.10)

| | Ex. VAT | Inc. VAT |
|---|---|---|
| Acorn Trackerball/Mouse NEW | £29.79 | £35.00 |
| Acorn Original Mouse | £25.00 | £29.38 |
| Acorn ERGO Mouse NEW | £12.00 | £14.10 |
| A7000 replacement Mouse NEW | £12.00 | £14.10 |
| Ergo (std) Risc PC Keyboard | £21.28 | £25.00 |
| Ergo curved Risc PC Keyboard | £29.78 | £35.00 |
| A400/A5000 replacement K/brd | £59.00 | £69.33 |
| A400/A5000 Ergo Keyboard | £69.00 | £81.08 |

## Replacement Floppy Drives

A3000/400/500 £29.00+vat (£34.08)
A30X0/4000/5000 floppy allows cross - formatting of HD and DD discs £29.00+vat (£34.08)

## POWERED SPEAKERS

| | Ex. VAT | Inc. VAT |
|---|---|---|
| 60 watts with PSU | £13.50 | £15.86 |
| 240 watts with PSU | £21.00 | £24.68 |
| Subwoofer system | £42.00 | £49.35 |

## Consumables

*Premier Quality Ink Refills*

| | | |
|---|---|---|
| Single refills | (1x22ml) | £6.00 inc |
| Twin refills | (2x22ml) | £10.00 inc |
| Triple refills | (3x22ml) | £14.00 inc |
| Tri- Colour | (C.M.Y) | £15.00 inc |
| Quad-Colour | (C.M.Y.K) | £20.00 inc |
| 125 ml | | £21.00 inc |
| 250ml | | £38.00 inc |
| 500ml | | £50.00 inc |
| 1 litre | | £70.00 inc |

*All sizes available in C.M.Y.K*

## *FLOPPY DISKS @ 20p!!*

| | Ex VAT | Inc VAT |
|---|---|---|
| DD Re-label Acorn fmt 10 | £2.00 | £2.35 |
| DD Re-label Acorn fmt 100 | £17.02 | £20.00 |
| HD bulk Acorn or PC 10 | £2.00 | £2.35 |
| HD bulk Acorn or PC 100 | £17.02 | £20.00 |
| HD Branded 10 pack | £3.00 | £3.53 |
| 20 cap Disk Box | £1.69 | £2.00 |
| 40 cap Disk Box | £2.54 | £2.98 |
| 100 cap Disk Box | £2.98 | £3.50 |
| Mouse cleaner | £4.99 | £5.86 |
| 3.5" Floppy head cleaners | £2.50 | £2.94 |
| CD-ROM cleaner | £4.25 | £4.99 |

## ARCSHARE

Acorn networking for PCs
**£29.95 exc Vat £35.19 inc Vat**
see network section for Cards etc

## StrongARM Rev "T"

£259.00 inc VAT
(with any Hard Drive / Memory purchase)

## COLOUR SCSI SCANNERS

*All scanners inc Acorn Software*



| | | |
|---|---|---|
| P'llel Mustek 600dpi | £99.00 | (£116.33) |
| Mustek A4 600dpi | £119.00 | (£139.83) |
| Mustek A4 1200dpi | £149.00 | (£175.08) |
| Epson GT7000 | £199.00 | (£233.83) |
| Epson GT7000P | £249.00 | (£292.58) |

*Imagemaster & Twain also available separately*

## Character Mouse Mats

| | |
|---|---|
| Southpark Kenny | £4.99 |
| Southpark Cartman | £4.99 |
| Disney Mickey, Pooh, Donald, etc | £4.99 |
| X-Files (four types) | £4.99 |
| Garfield or novelty | £4.99 |
| Standard mat £1.00 / Econ. £0.65 | |

## Switch Boxes

| | | |
|---|---|---|
| 2-1 with cable | £15.00 | £17.63 |
| 2-1 Auto with cable | £15.00 | £17.63 |
| 4-1 with cable | £19.00 | £22.33 |
| 2-1 Monitor/K'board | £29.79 | £35.00 |

## R-Comp CD-ROM Software

| | | | |
|---|---|---|---|
| ABUSE | £22.00 | Quake (due soon) | £33.00 |
| Descent | £27.00 | Syndicate | £26.00 |
| Doom+ Trilogy (£32.50 with book) | £30.00 | Towers of Darkness (Hexen Triple) | £30.00 |
| Heroes of Might and Magic 2 | £32.00 | Doom secrets Book (CTA Special) | £10.00 |

## RiscPC PC Cards

| | |
|---|---|
| DX2-66 | £145.00 inc VAT |
| DX4-100 | £195.00 inc VAT |
| 586-100 (Aleph) | £290.00 inc VAT |
| 586-133 (CJE 512) | £300.00 inc VAT |

**We can repair/upgrade your machine(s) and monitors at competitive prices please ask**
All Acorn's, BBCs & PCs

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# Photo printer stakes

Canon has just launched revised BJC-5000 and 6000-series ink-jet printer models. The new A3-capable BJC-5100 and A4 6100 are faster than before and print quality improvements, in the 6100 in particular with its tweaked 1440x720 dpi print head, suggest it could be a justifiable alternative to Epson's all-conquering Stylus Photo on photo-quality alone.

The rather disappointing BJC-7100, with its complicated PPOP plain paper optimising system, remains on Canon's catalogue for the time being, but despite being positioned as its photo printing contender, print samples we've seen from the 6100 are decidedly superior – on photo paper at least. For mono printing, the 6100 is capable of delivering text documents at a rate of up to ten pages a minute.

Canon is also persevering with its snap-in 300dpi scanner head, which swaps out the print head. At the much reduced price, it's now a more realistic proposition compared to a dedicated scanner. The 6100, which is now being assembled at Canon's Glenrothes plant in Scotland, also gets a USB port, the first for a Canon ink-jet printer.

Another notable feature of the 6100 is its use of separate ink-tanks for each individual ink colour, which Canon says will reduce waste and print costs. Most current ink-jet printers force users to throw away un-used ink when one colour is used up as the other colours are contained in one tank.

Oddly enough, Canon is revisiting the multiple tanks first pioneered in its BJC-600 model line about six years ago. The company adds that many of its future model releases will adopt multiple tank systems as well. Canon is also working to commence ink tank production in Glenrothes next year. Please note, RISC OS compatibility with the new BJC 5100 and 6100 was not confirmed at the time of printing. Please check compatibility before buying.



*BJC-5100*



*BJC-6100*

## Subscription gifts

All subscribers who had been expecting the latest batch of *Acorn User* subscriptions gifts should, by the time this is published, have received them. If you think you haven't, contact Richard Siggee at subscrip@acornuser.com for advice. (If you ring you will receive a re-direction message to the new phone number.)

# Castle's ISDN bargains

A very sad item of news, recently, was the demise of PMC Consumer Electronics based in Shipley, West-Yorkshire, which manufactured modems under the familiar Pace brand. PMC grew out of its famous parent company, Pace Micro-electronics, several years ago as a management buy-out, leaving Pace to concentrate on TV set-top boxes and digital TV products. Indeed, Pace recently acquired what was left of the old Acorn business after Element-14 was created.

This was to strengthen its broadband networking expertise, an area Acorn had invested in heavily in terms of research and development.

The Pace brand has been a familiar name in modems since the early '80s, but the market has become perilously cut-throat in recent years. Diversification into PC peripherals like TV tuners and graphics cards wasn't enough to save PMC. Despite the passing of PMC, some of us at least can benefit from bargain clearance stock.

Castle Technology has secured a supply of PMC's Pace ISDN Pro terminal adapters and is offering them for the very attractive price of £99 including VAT and delivery. The product was previously on sale for as much as £149+VAT. Castle is also throwing in a free trial offer for the Argonet Internet service, which is tailored especially for the Acorn community.

The Pace ISDN TA has all the usual ISDN features, including multilink PPP for aggregating two 64 kilobit channels to enable a 128 kilobit throughput (16K bytes/second or around a megabyte a minute).

For more information, check Castle's Website at http://www.castle.org.uk, or phone 01728 723 200.

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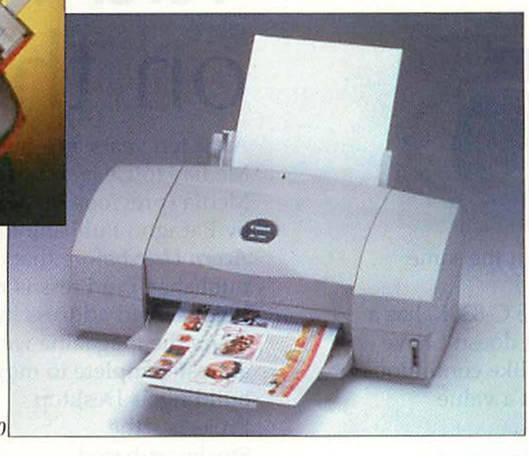
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For more information, check Castle's Website at http://www.castle.org.uk, or phone 01728 723 200.

# Digital camera news

Dorset-based RISC OS imaging specialists, Spacetech, have introduced some interesting new digital cameras and reduced the prices of some older favourites. The compact new 190g Olympus C-21 is priced £699.99. It sports a tiny, yet extremely robust aluminium alloy casing and despite its size is easy to use and packs a 2.1 million pixel 1/2in CCD chip – currently the best resolution in the consumer digital camera market – to deliver 1600x1200 resolution images. It also sports TTL focusing and light, metering.




Meanwhile, the best-selling mid-priced Olympus C-900 ZOOM has been superseded by the new C-920 ZOOM. Improvements include manual ISO sensitivity adjustment and a 4.5cm TFT display which now has a wider viewing angle. It also has increased memory for faster image saving and continuous shooting for all quality settings. Its 1.3 megapixel resolution provides 1280 pixel wide images. Spacetech are introducing the new model at the same price as the out-going version.




Olympus' entry level digital camera, the C-830L, has a similar resolution to the C-920 ZOOM, but doesn't have some of the newer model's extra features, like continuous shooting and an optical zoom lens. It's still a value contender at £349.99 and Spacetech also throw in a colour filter.

Olympus' current flagship consumer digital camera is the C-2000 ZOOM which is now available from Spacetech at £649.99. Like the compact C21, it has a high resolution 2.1 million pixel 1/2in CCD but adds a formidable 3x optical zoom lens. For photo enthusiasts, the C-2000 ZOOM also has a wide range of manual settings, plus external flash synchronisation.




For further information contact: Spacetech Ltd. at http://www.spacetech.co.uk, tel: 01305 822753, fax: 01305 860483, or e-mail: chris@spacetech.co.uk



# Attention all Linux fans

Keith Gaughan, from Aclare, Co. Sligo in Ireland, has contacted us to point out that he has started a project similar to the Linux Open Documentation Project by the name of Bibliotech. Full information is on the Web at http://members.xoom.com/dlm_design/bibliotech/ and submissions should be made via kgaughan@geocities.com.

It had been pre-announced on Acorn newsgroups in the summer, but a technical problem involving Keith's college mail server meant that earlier submissions were lost. He would be very grateful if everyone who has sent submissions re-send them.

# Tau Press on the move

After ten years as a hub of Acorn magazine production Media House is to be finally vacated. While IDG Media (previous owner of *Acorn User*) has been bought by Paragon Publishing and Europress (who owned *Acorn User* before that) has gone to Hasbro, the current publisher Tau Press is moving a few miles north of the Macclesfield address into Stockport.

As the magazine went to press negotiations were almost complete to move the business into the same building as Desktop Projects – the Stockport-based Acorn dealer.

Steve Turnbull, MD of Tau Press, said: "Since taking over *Acorn User* we had been planning to move and the opportunity to go to the Heapriding Business Park is ideal. Not only will we be right next to Desktop Projects, but our subscription mailing house is also just across the way.

"The old green field site was very nice (except when the wind was from the pig farm) but now we'll have the advantage of being easy to get to by road, rail, bus or even plane."

The move will happen just before the RISC OS '99 show – just as this magazine is hitting the streets. All telephone lines will change (the old lines will be re-directed) but the e-mail addresses will remain the same.

# THE DATA STORE

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# StrongARM upgrade service

Memory and processor specialists, Simtec, report they have received a lot of enquiries about modifying StrongARM cards from users wanting either a faster 233MHz part or to upgrade to a Rev T device. Therefore, Simtec has launched a service to meet this demand.

For £100 inc. VAT and UK postage, Simtec will send you a suitable postage box with anti-static packing and a static-strap for you to safely remove (and reinstall) your card and post it to Simtec. On receipt, Simtec will test the card, change the chip to a rev-T 233MHz device and, on 200MHz cards, make the necessary modifications and component changes to run the processor at approximately 233MHz. The card will also be tested before being returned.

Simtec aims to turn orders around the same day. UK postage is included as First Class Recorded. An extra £3 is required for registered post. Contact Simtec directly if you are based out of the UK. Simtec provides a six month guarantee for the upgrade.

Simtec very openly warns potential customers that because the process requires changing the processor and, thereby, the characteristics of the card, they point out that on some 'marginal' systems, like those with PC cards, and those that have already required adjustment, there is a small risk that the system will require retuning.

Simtec ensures that the customer's original card is returned, but re-tuning work is not included in the upgrade price. Contact Simtec at: Simtec Electronics, Avondale Dr, Tarleton, Preston, Lancs, PR4 6AX, tel: 01772 812863, fax: 01772 816426, or e-mail: info@simtec.demon.co.uk

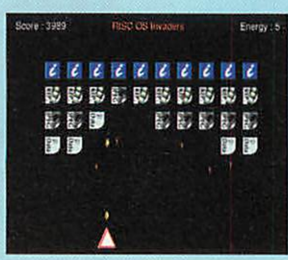
# Hidden invaders!

Robert Purchase (u8rp@dcs.shef. ac.uk) has found there is a space invaders game in RISC OS 4 hidden in the module *IRQUtils*.

To activate it, use the following BASIC command: SYS"OS_Module" ,2, "IRQUtils". These amusements aren't that unusual in the software world.

Microsoft's voluminous *Office '97* suite even hid a comprehensive flight simulation type program. The question is, was Bill Gates amused?




# ARM works with Microsoft

Apart from the fact that you can now buy StrongARM-based Windows CE machines, the increasing importance of ARM hardware to Microsoft has been recently demonstrated by a joint project which involved the two companies in optimising ARM-specific support for Microsoft's Windows Media Audio standard.

Driven by chip manufacturer demand for ARM-powered digital audio products with Windows Media Audio support, the ARM implementation is the first embedded processor-specific Windows Media Support. ARM and Microsoft were able to decrease power consumption and memory requirements by a factor of four, resulting in reduced system costs for digital audio devices running the Windows Media Audio file format and codec on ARM cores.

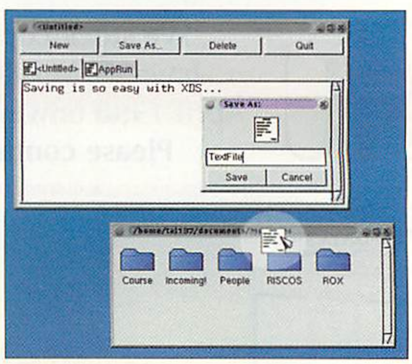
With the availability of Windows Media Audio for ARM, manufacturers of ARM core-based products can now provide CD-quality audio at twice the download speed and half the storage space of some competing audio formats, especially valuable as witnessed by the rapidly growing Internet music industry. Cirrus Logic will be among the first to implement the new audio standard in its range of embedded ARM solutions.

Meanwhile, ARM has announced joint development work with Ericsson on developing Bluetooth support for mobile phones. Bluetooth is an industry-wide standard for cable-banishing wireless short distance communications. Bluetooth is closely associated with the Symbian mobile operating system group, of which Ericsson is a member. Symbian is currently dedicated to the ARM platform. Finally, ARM has announced that 3Com, perhaps the largest player in the networking world, will implement ARM embedded cores in its next-generation networking cards.

# RISC O-X?

Thomas Leonard, a 3rd year computer science student at Southampton University, has announced the ROX desktop, a project which aims to provide a RISC OS style GUI on Unix/Linux machines. Leonard reports that the Filer code is mostly finished and the desktop already supports drag-and-drop loading and saving, application directories and an iconbar. You can download the core components (filer, session manager and text editor). Now Leonard is in need of some user-feedback. You need access to a Unix or Linux machine, but root access is not required.

The ROX homepage is at: http://www.ecs.soton.ac.uk/~tal197/ROX/index.html Thomas Leonard can be contacted at: tal197@ecs.soton.ac.uk



# London to follow Manchester?

As the legend goes, on 18th July 1997, Tommy Lowe wrote to the comp.sys.acorn.misc newsgroup asking if anyone might be interested in the possibility of joining a new Manchester Acorn user group. He felt that twenty interested parties would be a reasonable critical mass. Over two years later, the Manchester Acorn User Group (MAUG) has 150 members and is the UK's largest regional RISC OS user group. Its dozen-strong committee includes dealers, developers, students, teachers and enthusiasts from the north-west's thriving RISC OS community.

The bad news is that Tommy Lowe has, along with some other notable MAUG founding members, succumbed to the lure of career opportunities down south. The good news is that there are now proposals to emulate the success of MAUG in London. Their plan is for a smaller and more informal meeting arrangement, moving around the area and even including lunchtime get-togethers if warranted.

An informal initial meeting was scheduled to have taken place by now and hopefully the seed has been sown for the new London RISC OS User Group or suchlike. If you are interested in joining in too, e-mail dgs@argonet.co.uk for more information.

Manchester Acorn User Group – http://www.acorn.manchester.ac.uk/

# Sub-licensing RISC OS 4

RISCOS Ltd has issued a statement declaring their delight that negotiations with several sub-licensees for RISC OS 4 are nearing a successful conclusion: "The Board of RISCOS Ltd has established a pricing schedule that balances the development costs, past and future, of this high quality product with the needs of sub-licensees to be able to achieve competitive pricing. The schedule includes a progressive scale of discounts to reward those sub-licensees who are prepared to commit to volume purchases and which avoids subsidising individual equipment manufacturers at the expense of others.

"RISCOS Ltd is committed to carrying the operating system forward into the new Millennium as a cutting edge product for ARM-based systems. We have already commenced work on hardware, VIDC and IOMD independence, the ability to run in 32-bit mode and are adding new features to the OS." Paul Middleton, RISCOS Ltd's Managing Director added: "I am delighted that sub-licensees have recognised the increased speed, stability and features that RISC OS 4 brings. This new operating system complements perfectly the advanced technology being incorporated in the new generation of RISCOS computers that will soon be launched."

## Acorn Southwest Show

The Acorn Southwest Show will once again be taking place, on Saturday 19th February 2000 at The Webbington Hotel, Loxton, nr Axbridge, North Somerset.

The show is supported by Bristol Acorn Risc User Group. The doors open at 10am and close at 4.30pm. Entry will cost £2 for adults, £1 for ARM Club/RISC OS Foundation members, while children under 16 are can enter free if accompanied by an adult. For information about the show: tel/fax: 01935 413170, e-mail: acornshow@argonet.co.uk, or browse: http://www.argonet.co.uk/acornshow

## In brief

### Sail safely with RISC OS

**Stuart Nundy spotted a novel use for a Risc PC, recently. A BBC 9 O'Clock News item on Friday, 17th September, covering the use of aircraft-style in-flight black box recorders for commercial shipping, like ferries, showed a Risc PC monitoring a prototype black box fitted to the Pride of Portsmouth ferry. With Windows' worrying reliability level, perhaps we shouldn't be surprised to find a Risc PC being employed to monitor a critical task such as this. If you have seen any other out of the ordinary Acorn/RISC OS applications, let us know.**

### Contacting RiscCAD

**David Buck would like to remind everyone interested in the *RiscCAD* package that from 8th October 1999, correspondence should be addressed to him at a new address: 33 Cromwell Crescent, Pontefract, West Yorkshire, WF8 2EG. In fact, by the time you read this, forwarding from the old address will have ceased. Alternatively, you can e-mail: david.buck@freeuk.com.**

### Acorn's FTP site closes

**Considering the fact that Acorn as an operating company no longer exists, this news is perhaps more surprising for its lateness than for its actuality. Since Friday 24th September, the Acorn FTP site (ftp.acorn.co.uk) has no longer been available. Pace Micro Technology, who acquired the remnants of Acorn Computers earlier in the year, kindly continued to host the Acorn FTP site June. However, Pace did not acquire acorn.co.uk and acorn.com domains.**

**Clearly, the Acorn FTP site was living on borrowed time provided by Pace. Indeed its use has reduced over time to very low levels and most of its contents aren't very recent. However, there is a sentimental and historical archive value in the site and *Acorn User* have distributed snapshots of its site content on cover CD-ROMs, so it lives on in a sense.**

# Name that domain

Free ISPs, Internet Service Providers offering free dial-up access, e-mail and Web space, are now so numerous that ever more attractive features are being devised to ensnare customers. Limited duration weekend unmetered calls on an 0800 number are offered by companies such as IC24 (http://www.ic24.co.uk/) while Screaming.net (http://www.screaming.net/) requires you to change your telephone service provider to get free local evening and weekend calls to its servers.

Totalise (http://www.totalise.net/) give you free shares in the company, free telephone support and Web access to your Totalise e-mail address. freenetname Ltd is one of several companies offering free connection, e-mail, Web space, free phone support and a free Domain Name registration. With freenetname you also get free DNS hosting with unlimited address e-mail and Web forwarding to your own exclusive co.uk or org.uk domain name, adding kudos and credibility to your Internet presence.



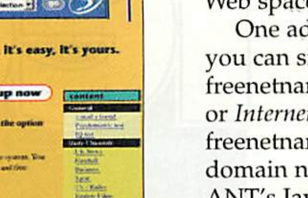
*Minutes away from your own domain*

Domain name registration with Nominet normally costs £94 inc VAT for two years, and DNS hosting, e-mail and Web forwarding – the cross-translation of e-mail and Web page addresses to machine IP numbers – usually incur extra charges. freenetname gives you all these free, and expects to recover the costs from the local-rate telephone call revenue and make a profit as well. For this reason, you must use their dial-in number to send and receive e-mail, and to upload pages to your domain's 20Mb Web space.

One advantage for Acorn users is that you can sign up online for all these freenetname goodies without Windows or *Internet Explorer*. I was able to open a freenetname account and register a nice domain name using my Risc PC and ANT's JavaScript *Fresco* version 2.03 with SSL. I spoke to a freenetname technical support advisor who recognised the Acorn brand, as he'd used BBC Micros all the way through school. Get your domain while you can from http://www.freenetname.co.uk.

# Thumbs up for Web images

*ThumbHTML* by John M. Jakobsson creates an HTML page of small thumbnail pictures from a directory of Web image files. The desktop program uses Acorn's *ChangeFSI* to make small JPEG copies of your original GIF and JPEG images, and creates a tabulated HTML page to display them on your Browser. You'll need version 1.15 of *ChangeFSI*, which can be found at http:// www.arsvcs.demon.co.uk/ webster/download/dload.htm




To include optional hyperlinks to the full size images, the program copies them to a new directory, which seems a waste of space unless you delete your originals. The resulting index page loads very quickly, but the thumbnails vary in size because they are scaled equally. Watch out for errant slashes in filenames that may result in blank thumbnails. You can find *ThumbHTML* at http://www. jako.demon.co.uk/progs/ info/th.html

Paul Vigay's *AntUtils v1.22* uses a different approach to display thumbnail images more neatly, but the page takes much longer to load. Paul's program presents the full size images to the browser which scales them to a constant width on loading. *AntUtils* offers many other functions to enhance the *ANT Internet Suite*, including timed fetches, random sig. for e-mail, search engine selection and *Fresco* feature controls. Find it at Paul's shiny new site http://www. vigay.com

## In brief

### Knitting your browse

Carl Pfeiffer's *Browse* mailing list exists as a focus for support of Acorn's *Browse* Web browser. The mailing list is unofficial but has many members including some of the original authors of *Browse*.

Recent discussion has covered impending version updates and even the practicality of starting new RISC OS Web browser projects based on some of the open-source browsers from other platforms, such as *Amaya*, *Netscape* and *Opera*.

To join the list send an e-mail to majordomo@riscos.man.ac.uk with 'subscribe browse' in the body of the message.

### Pete's receipt

Peter Gaunt's been busy adding to his Internet utility software wildlife menagerie. 'rrt' isn't a frog call, but gives *ANT Suite* users the facility of automatically sending back confirmation that an e-mail has been received. These requests are embedded in the plethora of normally hidden headers that precede the e-mail text itself.

Peter suggests that setting this up requires a moderate amount of thought, and recommends users read his help file and test it locally before going 'live'.

You can badger Pete for the program by sending an e-mail to badger@ beard.demon.co.uk with just 'get armadillo apps/rrt' in the body.

### Socketeer bears fruit

*Socketeer*, the popular freeware Internet connection application by Matthew Bloch, is now being nurtured by Andy Carter. Andy, known as Fruit to his oldest friends, is a long-time Acorn enthusiast and has owned many Acorn machines, from an Atom to a Risc PC.

For anyone setting up *Socketeer* with other freeware Internet programs, his Argonet Website contains useful information and resources.

You can also find out about the Waterwheel plant and other carnivorous genera that Andy nurtures in greenhouses at his home by visiting http://www. argonet.co.uk/homepages/fruit/

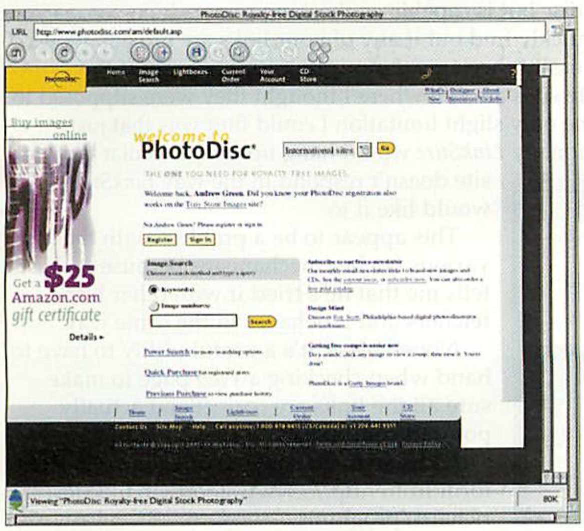
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# "We've got it in stock..."

The CD distributed with RISC OS 4 contains a variety of digital stock photography images, all supplied by one of the major players in that industry, Photodisc. This acknowledges that they, at least, are interested in designers working on platforms other than the Mac.

The advantage of using good digital stock photography is clear: the designer gets the flexibility of ready-made images to work from in much the same way as clip-art, but without the prohibitively high cheese factor.

Many traditional stock photography traders insist on pricing a specific image to match the context in which the image is used: A monochrome print of an image used in a short print run will cost less than the same image printed in colour for a widely distributed magazine. And then there's the issue of how to charge for an image to be displayed on a Website.




Photodisc, and a small number of other companies, operate a much more straightforward pricing structure, largely based on the size of the digital file containing the image. The images are royalty-free so, having licensed them, you can use them in as many different projects as you wish (with one caveat about packaging materials, greetings cards and the like). Photodisc's Website, at www.photodisc.com, makes it possible to search, license and download single images in a single session, although you'll need Secure Socket Layers available in your browser to be able to licence the images with your credit card.

Their total image library runs to tens of thousands of photos, and contains a wide variety of objects photographed against a clean white background, making them ideal for compositions.

One other royalty-free digital stock photography trader worth mentioning is Stockbyte, whose site at www.stockbyte.com is in dire need of attention – although their advertised vacancy for a webmaster suggests they're looking to improve in this area. Nonetheless, it's possible to buy specific images directly through the site, and Stockbyte also offer a custom CD-burning service.

## Contacting AU

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graphics@acornuser.com
Don't forget to send in your entries for Pic of the Month!

# The new OLE

As a direct result of their involvement with the Xemplar NC, Clares Micro Supplies have developed a unique-to-RISC OS variation on the idea of OLE, called PCA. With traditional OLE, an object in one application (often a graphic in a DTP document) can be exported to an appropriate image-editing application, modified, and then saved back into its original place within the first document.

The trouble with this approach is that it can prove to be highly memory-intensive, as two copies of the object are used by the computer until the modifications are saved back.

PCA-compliant applications change this by allowing the object to be modified *in situ* by any PCA tools the system has available: the extra editing tools use the in-memory copy contained in the actual workspace of the host application.

PCA tools don't have to be loaded immediately either, just available for the system to call when appropriate. The downside of this approach is that the PCA host application has to trust all of the tools available on the system not to corrupt the block of memory they share. The clear upside is that the system allows consistent editing features to be maintained across a whole range of compliant host applications, allowing each one to be extended in functionality as and when new tools become available.

It's a very RISC OS way of doing things. The typical Windows approach of having to use a single application to make every conceivable adjustment to a document is rare as it stands on RISC OS – the OS makes things so easy to apply a range of small programs to a single project. PCA hints at a highly useful development of that strategy.

Currently the only tools available are for editing sprites, although Clares envisage text-editing and other tools becoming available as the idea catches on. If *Zap* or *StrongEd* (assuming continued development of the latter by someone) were to become PCA compliant, it would be possible to edit a text object in one application directly, using your favourite text editor.

Clares' own *Composition* and David Pilling's *Ovation Pro* (a perfect home for the technology) are PCA compliant, with *TopModel* and *DaVinci* soon to follow. It remains to be seen whether many other applications will embrace the system – see www.claresmicro.com for further news as it happens.

# LinkSure

First off this month is another visit to Richard Goodwin's 'House of Mabel' Website. When downloading software from the Web to review in this column, one of my pastimes is spending a few extra minutes wandering around people's sites. This either lets me discover additional goodies or lesser known software to download and more often than not gives me a bit of fascinating background to the various RISC OS users on the Internet.

One goody I discovered on Richard's site was a little application called *LinkSure*. *LinkSure* is an amazingly simple yet effective HTML link checker. I've subsequently decided that it's one of those applications that you never thought you'd need, but once you've used it a few times wondered how you ever made do without it.

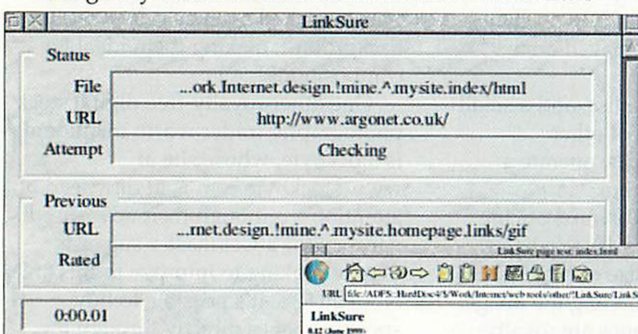
In a nutshell, it checks links on Web pages. It's pretty efficient at its job too – and so simple to use. Just double-click on it and it pops onto the iconbar. All you then have to do is to drag an HTML file onto its icon and it starts scanning straight away.

Not only does it check any links to local files on your hard disc but is capable of checking remote links too, so you can quickly find out if any of your links are broken. Indeed, I can easily check my various links pages to see if the remote sites are still where I thought they were supposed to be. The only slight limitation I could find was that just occasionally *LinkSure* would hang up if a particular remote site doesn't respond in the way *LinkSure* would like it to.

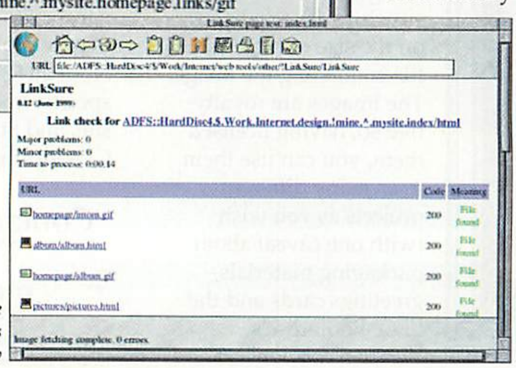
This appear to be a problem with the various fetcher mechanisms because Richard tells me that he's tried it with other http fetchers and it behaves in the same way.

Nonetheless, it's a useful utility to have to hand when checking a Web page to make sure all the links are correct and actually point to valid pages.

*LinkSure* is available to download in beta form from http://www.goodwin.uk.com/richard/programs/




*LinkSure's progress window*




*Part of the HTML results window*

# Desktop themes

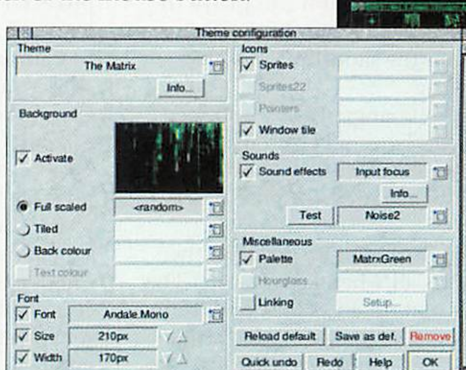
Also on Richard's site is an interesting project he has just embarked upon – and one I'm surprised no one has done before. A desktop theme selector. What is this? I hear you ask. Well, it's probably more familiar to people in the PC world (possibly because they are not happy with the look of Windows on their desktop) and is a system whereby you can change the whole look and feel of your desktop environment with a simple click of the mouse button.

For instance you could give your desktop an 'Aliens' feel (why you should want to, I'm not sure, but anyway the choice is yours) complete with new icons, backdrop and window furniture (the scroll bars and window icons and so on). You can even assign sounds to various wimp events if you wish to be really irritating.

Although in it's early development stages, Richard's implementation is looking good so far – as the accompanying screenshots should show. You will probably recognise it if you've been to the movies recently. Keep checking the URL above, and I'm sure Richard would be willing to include your own artwork if you've designed a theme of your own.



*The Matrix desktop theme*




*Theme configuration window*

public domain

# ECS Utils

Here is another useful little application which deserves a mention. It's slowly evolved over time to become a helpful collection of desktop enhancers, all housed in a single application.

Its main features fall into several categories, including Filer additions, wimp additions, mode additions and an application launcher. A lot of *ECS Utils'* features are invisible to the user, activating themselves only when required by the use of a 'hot key' press.

Most of the enhancements are valid while the mouse pointer is over the window you want to act upon. Move it over a standard RISC OS Filer window and you can then press the function keys to change the display mode or sort order, bring windows to the front, back or center of the screen.

A useful option for non-RISC OS 4 owners is the ability to open a 'notes' directory simply by moving the pointer to the right edge of the screen and clicking Select. This will also open automatically during drag operations so you have a convenient way of saving files when you've started dragging but forgotten to open a destination directory first.

*ECS Utils* lets you toggle between frequently used screen modes at the single click of a button, as well as providing a function to turn off the hourglass – which might be useful to *Zap* users!

You can also scroll a window up, down, left or right simply by holding the Alt key down and pressing the relevant cursor key. This works on any window, even if it has no scroll bars.

Something unique, which the author claims is entirely new to any computer platform, is called a 'Version Manager'.

Drag a Filer object (file, application or directory) with the Alt key pressed and a new directory will be created with a name derived from the first five letters of the name of the Filer object followed by the letters 'Vrsns'. Inside this directory will be another, this one has a name derived from the Date/Time stamp of the original Filer object. Inside this will be the unaltered original Filer object. This is very useful when creating many versions of a program or file, as you don't need to keep renaming them.

Finally there are some invaluable miscellaneous functions of *ECS Utils*; A rudimentary mouse speed control mechanism, a snapshot grabber and a fine pointer control.

The window snapshot utility is handy very. Just tap both Shift keys simultaneously and *ECS Utils* will save a snapshot sprite of the window or menu below the mouse pointer.

Hold Ctrl down at the same time and *ECS Utils* will strip off the window furniture (scroll and title bars and so on) and just save the actual contents of the window for you. Smashing!

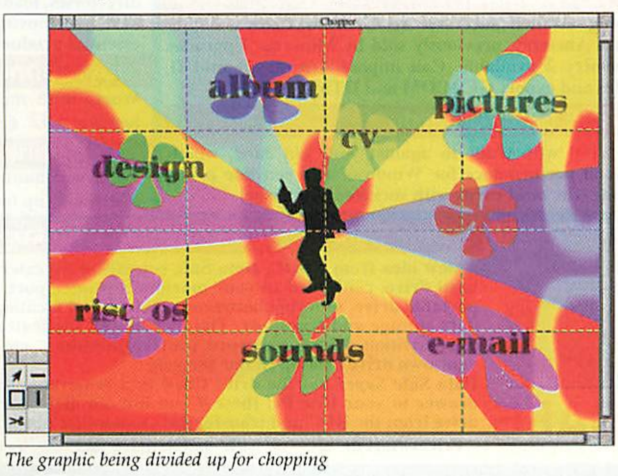
*ECS Utils* comes complete with a comprehensive *!Help* file and even a manual in *StrongEd* format. It can be downloaded from ECS' Website at http://www.innotts.co.uk/~ecsltd/

# SChopper

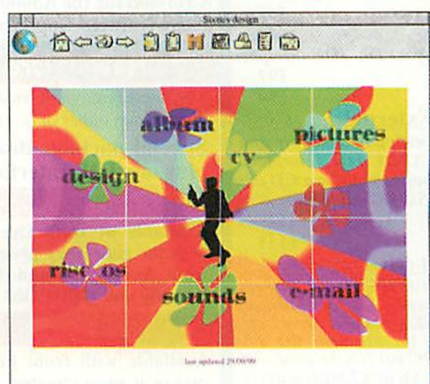
Rob Davison has come to the help of graphic Web designers with this handy little utility to chop up sprites. Web designers will know that it's sometimes desirable to have a big image made up from multiple image pieces, but up until now, creating these pieces has been a tedious job of cutting and pasting.

*SChopper* lets you quickly divide any sprite file up into horizontal and vertical 'slices', before saving out as a collection of rectangular sprite pieces, which you can then convert into GIF or PNG format ready for uploading to your Website. By the time you read this, GIF, JPEG, and PNG support may have been added, but in the meantime download yourself a copy of Peter Hartley's *InterGIF*.

*SChopper* is available to download from http://www.geocities.com/SiliconValley/7320/archives/



The graphic being divided up for chopping



After chopping. The reassembled pieces on a Web page

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# What? No cover disc?

You can blame the *Acorn User* survey. So what's going on? Well, the story goes something like this: For a long time now the restrictions of an 800K disc, even with compression, have been proving a little tight. But quite a reasonable percentage of RISC OS users still own machines of the A300, A400 and A3000 vintage – a testimony to Acorn's build-quality, but a pain in the neck for disc collators.

So what to do? Occasionally we have been forced to go to 1.6Mb discs, and have run off a smaller quantity of 800K discs, but this is not a good solution. What we also find from talking to readers who need 800K discs is that they do own CD-ROM drives.

Along comes the *Acorn User* survey for 1999 and we take a look at the results. It is a fact that RISC OS people have the highest percentage of Internet connections than any other group of computer owners – in excess of 80 per cent.

Ownership of CD-ROM drives comes in at a staggering 97 per cent – staggering because none of the early machines had them as standard, most of them have been bought as add-ons.

So why not put a CD on every magazine?

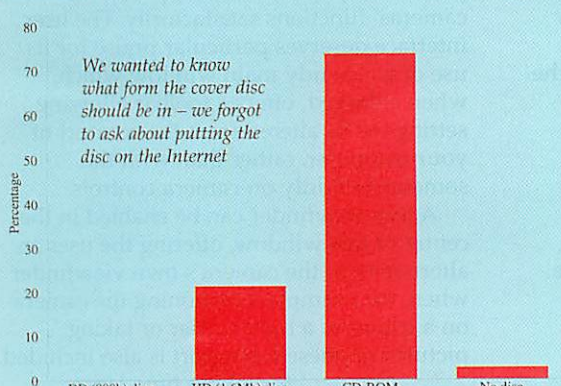
The programmers in the RISC OS market just don't have the output to fill even a high proportion of a CD every month; within a couple of months we would have exhausted the available software. So instead we are launching a combination of CD and Internet support.

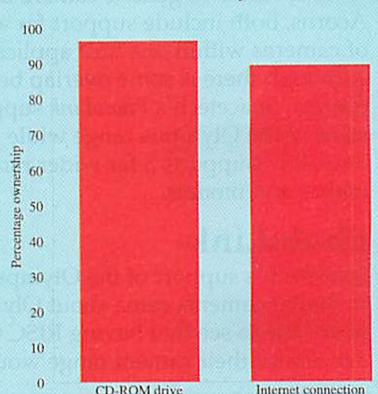
For every issue, what would have been the cover disc will be put onto the *Acorn User* Website for downloading – satisfying those with the Internet connection who need the disc contents for that month. And every third issue we will put a CD on the cover containing not only the last three 'cover discs' but additional content as well, taking a particular theme, such as graphics, programming, DTP and so on.

Inside the magazine that frees up that little bit more space for the most popular items in any mag: Hardware and software reviews.

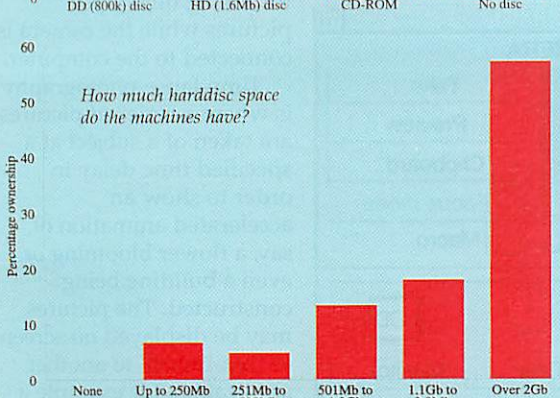
## Survey results

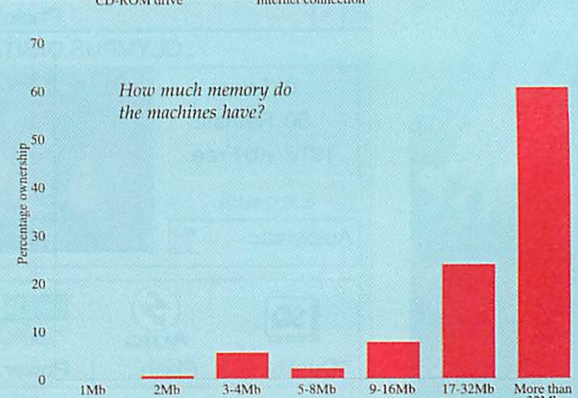
Here's a selection of the results that came through on this year's *Acorn User* survey.




*Here you can see the level of Internet connection and CD-ROM drive ownership – although it is slightly skewed by the ease of replying to the survey via e-mail*



# Digital snaps

*Alasdair Bailey turns David Bailey in this digital camera review*

Digital cameras have been around for quite some time now. Over the last few years things have improved in leaps and bounds and although photographic-quality hard copies are still expensive to obtain, for certain applications, digital is now most definitely the better route.

This review covers three cameras for which software drivers are available to allow use with RISC OS machines.

There are two generic camera drivers for Acorns, both include support for a variety of cameras within one host application. Although there is some overlap between the drivers, Spacetech's *PhotoLink* supports most of the Olympus range while Irlam's *Snapshot+* supports a far wider range of makes and models.

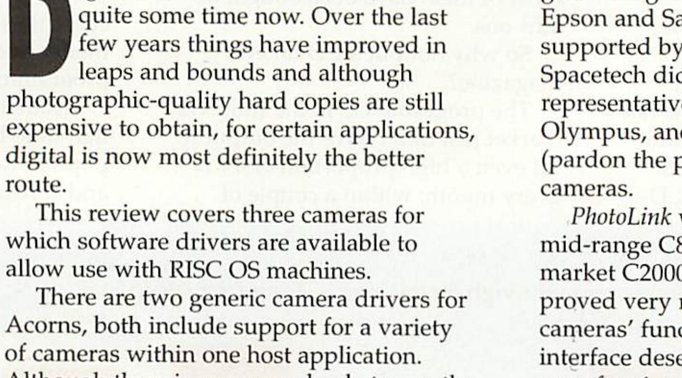
## PhotoLink

Spacetech's support of the Olympus range of digital cameras came about Olympus were able to see that having RISC OS drivers for their camera range would be a good thing. A couple of older models of Epson and Sanyo cameras are also supported by the software. However, Spacetech didn't find all the UK representatives as helpful as those at Olympus, and so are currently focusing (pardon the pun) solely on their range of cameras.

*PhotoLink* was put to the test using the mid-range C830L and the rather more up-market C2000Z. Overall, the package proved very robust and supported all of the cameras' functions satisfactorily. The user interface deserves particular praise for its use of a nice tidy main window which, when enlarged, offers a toolbar allowing settings to be altered from the comfort of your computer, rather than with the sometimes fiddly on-camera controls.

A live viewfinder can be enabled in the centre of this window, offering the user an alternative to the camera's own viewfinder when, for example, positioning the camera on a tripod in a tight corner or taking pictures of oneself. Support is also included for taking time-lapse pictures while the camera is connected to the computer.

Time-lapse photography is where a series of pictures are taken of a subject at a specified time delay in order to show an accelerated animation of, say, a flower blooming or even a building being constructed. The pictures may be displayed on screen or 'hot-linked' to another application, for example a utility to upload the




*PhotoLink's control window*

*PhotoLink* currently supports the following cameras:

- Epson Photo500
- Sanyo ImagePC
- Olympus D200, D200L, D210L, D220L, D300L, D320L, D330L, D340L, C900Z, C840L, C830L, C820L, C800L, C420L, C400L, C400, C1000L, C1400L and the C2000Z

*(Note: the Olympus 'D' cameras are the same as the 'C' models, but are grey imports and may have NTSC video instead of UK PAL)*

pictures to the Internet to form a live Web-cam.

My only major gripe with *PhotoLink* is its naming of time-lapse pictures. For some reason, it preserves the cameras internal conventions and names the pictures first in single digits (1, 2, 3 ... 8, 9, 10) rather than 001, 002, 003 ... 008, 009, 010 and so on. This means that images aren't properly sorted in filer windows as the computer will put a file of name '10' before one named '2'.

The problem can be overcome by sorting the files by date but many freeware slide show apps don't support this, so manual rearrangement is necessary – Spacetech are aware of this problem, and it's one of several features being considered, in the meantime a program such as *NumberFix* by Jochen Lueg http://www.argonet.co.uk/users/tudor/ should help you out.

The hot linking feature which allows for photographs to be automatically passed on to another application is a nice idea. However, displaying the pathname of the directory it's set to and perhaps creating extra directories to overcome the 77 files per directory limit on older versions of RISC OS would be worthwhile additions.

## SnapShot+

Irlam's generic driver, *SnapShot+*, offers support for a far wider range of cameras than Spacetech's offering. Some overlap exists between the packages, notably the C830L which is included in this review and was tested with both. An Agfa ePhoto 1680 was also borrowed to test *SnapShot+*, see elsewhere in this article for how the camera itself fared.

*SnapShot+* is able to carry out all of the basic functions which you would expect; it offers full support for remote adjustment of a camera's

*SnapShot+* from Irlam currently supports the following makes and models of digital camera:

- Agfa ePhoto 307, 780, 1280, 1680
- Epson PhotoPC 500, 600, 700
- Sanyo ImagePC, Digicam 200, 210, 300
- Olympus D200, D200L, D210L, D220L, D300L, D320L, D330L, D340L, C400, C400L, C410L, C420L, D600L, C800L, C820L, C830L, C840L, C1000L, C1400L, C1400XL, C2000Z

*(Note: the Olympus 'D' cameras are the same as the 'C' models, but are grey imports and may have NTSC video instead of UK PAL)*

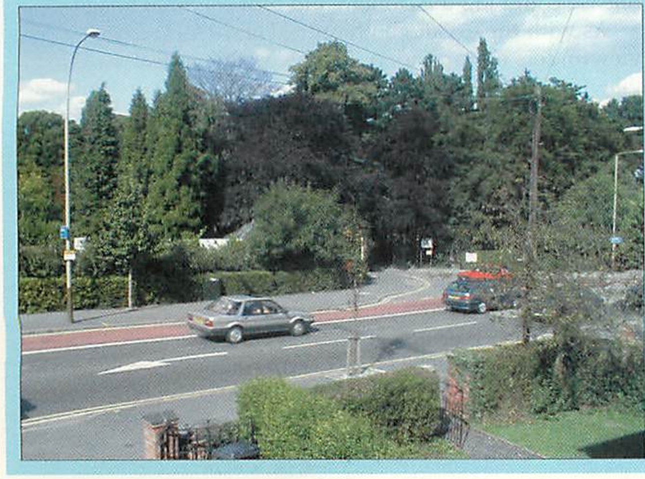
# Olympus C830L

Although this model carries the lowest price tag of the three (£345.99), it is by no means bottom of the range. Digital cameras can now be obtained for as little as £150 but we decided that this camera represents the minimum standard which is acceptable for most uses.

The camera features both an optical viewfinder and an LCD screen, useful for composition purposes as well as looking back at photos already stored on the camera. The resolution of the screen is good but it does make indoor pictures look significantly darker than they turn out on the computer. This can be remedied by adjusting the brightness on the camera but then a similar problem would exist out of doors, requiring the brightness to be altered again.

A second small LCD display is provided on the top of the unit, giving details of how many photos can be stored at the current resolution along with battery charge and

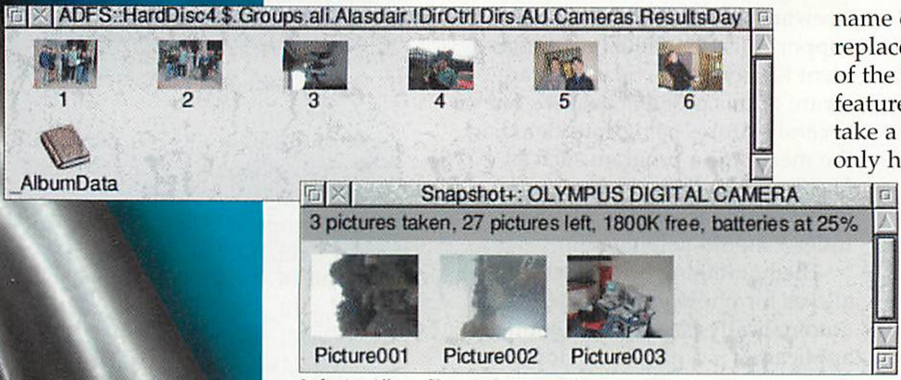


other mode information. This screen comes in very useful when trying to conserve battery life as the other full colour screen really does drain power at an astounding rate.

By default, the camera ships with a 2Mb memory card, this is sufficient for most users and the resolutions possible with this camera limit the size of files anyway. The card is able to store nine pictures on the high quality setting (1280x960), thirty in standard (640x480) and four in super high (again 1280x960 but with less compression so a higher quality image results).

Overall, the C830L is a very nice little camera. As can be seen from the sample photographs, the picture quality is almost comparable to that of the slightly more expensive Agfa model, with resolution being the only downside. If you're looking for a well-priced quality camera to capture pictures for a Website or perhaps a computerised archive of some sort, you can't go far wrong with the C830L. However, if you want to obtain high-quality printouts or use the output in any professional publication, one of the higher-end models would be a better bet.



*Left: An Album filer window    Right: Snapshot+ in action*

features along with previewing and downloading pictures from the camera. My main cause for concern with this package is that it opts for a main window which is very much in the style of *Paint's* sprite file window. This means that all options are accessed via a very large menu structure and is somewhat daunting at first.

Irlam's software also includes support for capturing time-lapse movies. However, this is restricted to exporting the sequence as an Acorn *Replay* movie file, rather than storing a sequence of the original images. This is a good feature but some users would appreciate the ability to save the individual pictures.

The Irlam drivers can be supplemented with a tidy little clip-art indexing utility by the name of *Album*. When activated, this simply replaces filer icons with a small thumbnail of the image contained within the file. This feature can be very useful, and while it can take a while to create the thumbnails, this only has to be done once per directory. *Album* also allows all of the pictures from a camera to be downloaded onto the computer at once – a handy utility.

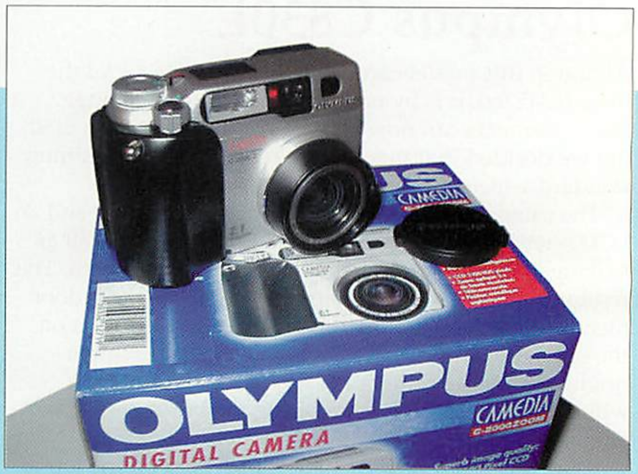
Overall, the Irlam drivers are very well put together and carry out all their functions correctly. However, the drivers were found to be slightly less stable than the Spacetech alternative and it was also necessary to manually flush the application's temporary store after a forced exit, otherwise it refused to re-load.

## Other issues...

All of the cameras reviewed used four AA size batteries and none really stood out as being better than the others on power consumption. AC adaptors are available for all three but aren't included in the prices quoted here. The Agfa model does include a battery re-charger though which is very handy and saved many trips to the garage during testing!

Each camera considered here also

# Olympus C2000 Zoom




The C2000Z is a very nice bit of kit. Although this is reflected in the price tag it is well worth the extra cost (mind you, it's been reduced by £100 recently, so price-wise it's very competitive with the Agfa). Olympus have basically taken all of the features you'd expect from a good film camera and applied them to this digital offering. A powerful 3x optical zoom is included along with features to give the more experienced photographer greater control over the final output.

Shutter speed and aperture size may be manually adjusted, but the point and shoot support seen in the lower priced cameras is also preserved for those who like things simple. A handy little remote control is also included for use in positions where pressing the shutter release could jog the camera and blur the final image.



As with the C830L, both optical and LCD screen viewfinders are provided. However, the optical viewfinder is offset from the main lens both horizontally and vertically so the composition is not quite perfect in the resulting picture (this is corrected in the C1400XL, not reviewed here).

Photos of all resolutions produced by the C2000Z are that bit more crisp than those taken using the other cameras considered here. This is demonstrated to a greater extent upon closer examination, so do take the time to refer to the example pictures on the *Acorn User* and Spacetech Websites if you have access.

All in all, the C2000Z is a very high quality, robust camera. With a price tag of £649.99, it'll set you back a few pennies more than the other two, but it is well worth it if you need a high quality output.

included a video-out lead for displaying pictures on a TV, along with automatic flash and red-eye reduction mode.

Most digital cameras on the market at present use a serial lead to communicate with the base computer. This system is good because every RISC OS computer, bar some A3000s, supports it by default, although things can be a little slow, with a limit of 115200bps being imposed by even a Risc PC's serial port. Some cameras are starting to make it on to the market with USB connectors. It would be very nice to see support for these under RISC OS in future, provided the Mico and RiscStation manage to support the relatively new protocol.

Obtaining photographic-quality hard copies of your snaps is a little complicated at present. For best results you'll need a professional dye sublimation printer, but the cost of such a unit puts them well out of reach for most homes, schools and colleges.

However, Olympus have come up with a smaller version which is more affordable and is currently available from Spacetech. The new breed of 'PhotoReal' printers which are now available at around the £300 mark also produce hard copy of an acceptable quality. Again, these are available with RISC OS drivers from Spacetech.

## And finally...

So far as these three models are concerned, you most definitely get what you pay for. The best advice we can offer is that you spend as much as you can afford. As with all computer hardware it might be worth waiting a little longer to see what new technology becomes available in the next year or so as the manufacturers start to target the consumer market more and more aggressively.

If you want to buy now, the recently reduced C2000Z from Spacetech is a bargain, it's new price brings it into the same range as the Agfa, while it's output quality remains high.

When it comes to software, Spacetech's *PhotoLink* is the better of the two but it doesn't support many non-Olympus cameras so *SnapShot+* still has its niche. END

## Agfa ePhoto 1680

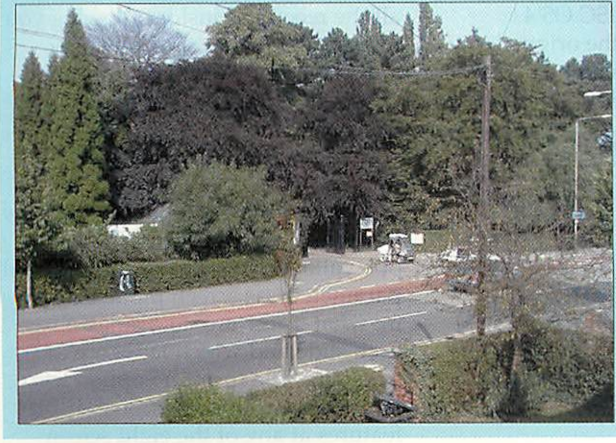



The *ePhoto* boasts a rather more innovative design than the Olympus models considered here. Its case is split into two sections with the section carrying the lens able to rotate through a full 360 degrees. This is very useful for taking self portraits but does make the camera a little difficult to hold on to. Further, the lack of an optical viewfinder means that the battery hungry LCD display must be left on at all times. A battery re-charger is supplied though, along with four re-chargeable AA size batteries, so it's not so bad really.

The quality of picture obtained with the *ePhoto 1680* lies somewhere between that possible with the two Olympus models. The pictures aren't quite as colourful and sharp as those from the C2000Z yet a higher resolution is possible than when using the C830L.

However, I must add that the LCD screen on this model is superior to either Olympus offering both in refresh rate and colour quality, it almost makes up for the lack of an optical viewfinder.

Agfa seem to have designed this camera as a digital camera rather than taking the approach Olympus seem to favour of perfecting the digital technology then packaging it in a very conventional-looking case. There's nothing wrong with this but it does mean the more experienced photographer is starved of some of the features he'd be used to.



However, if you don't know what aperture and shutter speed are all about, you won't miss them anyway. The *ePhoto 1680* retails at £618.05.

## Product details

| | |
|---|---|
| Product: | **PhotoLink camera drivers** |
| Price: | £69 (inc VAT) |
| Supplier: | Spacetech Ltd |
| Product: | **SnapShot+ camera drivers** |
| Price: | £59 (inc VAT) |
| Supplier: | Irlam Instruments Ltd |
| Product: | **Album** |
| Price: | £31.14 (inc VAT) |
| Supplier: | Irlam Instruments Ltd |
| Product: | **Olympus C830L camera and drivers** |
| Price: | £345.99 (with PhotoLink from Spacetech) £523 (with SnapShot+ from Irlam) |
| Supplier: | see below for company details |
| Product: | **Olympus C2000Z camera and PhotoLink drivers** |
| Price: | £649.99 (inc VAT) |
| Supplier: | Spacetech Ltd |
| Product: | **Agfa ePhoto 1680 with SnapShot+** |
| Price: | £618.05 (inc VAT) |
| Supplier: | Irlam Instruments Ltd |

## Suppliers

| | |
|---|---|
| Supplier: | Spacetech Ltd, 1 The Courtyard, Southwell Business Park, Portland, Dorset. DT5 2NQ |
| Tel: | 01305 822 753 |
| Fax: | 01305 860 483 |
| E-mail: | sales@spacetech.co.uk |
| Web: | http://www.spacetech.co.uk |
| Supplier: | Irlam Instruments Ltd, Brunel Science Park, Brunel University, Uxbridge, Middlesex. UB8 3PQ |
| Tel/Fax: | 01895 811 401 |
| E-mail: | sales@irlam.co.uk |
| Web: | http://www.irlam-instruments.co.uk |

# NoticeB

## *Paul Vigay moves into display mode*

The superb graphics and text quality of Acorn machines make them ideal for demonstration and presentation purposes. Indeed, the anti-aliased font system was originally designed for optimum display quality on televisions and video output.

*NoticeBoard Pro* is a comprehensive presentation package, enabling users to organise and display a collection of 'slides', either as an unattended rolling display, or as a manually controlled presentation.

RISC OS users have long been waiting for an alternative to Microsoft *Powerpoint* for use on their platform. While not intending to compete with *Powerpoint*, comparisons are inevitable in this world of 'keeping up with industry standards'. Although lacking in some of the sophistication and extent of *Powerpoint*, *NoticeBoard Pro* does score in ease of use and, of course, the flexibility of the RISC OS user interface.

This is not to say that *NoticeBoard Pro* is by any means lacking in features. It contains an impressive range of controls and options. However, it's ease of use and non-daunting user interface will make it ideal for schools and colleges where teachers may want to create their own presentations with the minimum of effort and fiddling around.

## What you get

*NoticeBoard Pro* is supplied on two discs and consists of a player application and a slideshow editor application. The idea of supplying the editor and player seperately is a good one because it means that not only can usage and control be kept simple, but it also means that you can distribute copies of the player with your finished slideshow. (Permission is granted for users to distribute the player-only application.)

Installation is a simple matter of running an install program and telling it where you wish to install on your harddisc. I did run into a few problems here – having just installed RISC OS 4. The installer program expects to find the various system modules inside your *!Boot* structure. However, many of these are actually inside the ROM in RISC OS 4, so I ended up with a duplicate set of modules copied onto my *!Boot* application.

Personally I would have liked to be either given the option of installing these modules or, more preferably, *NoticeBoard Pro* to have recognised that I already had newer versions in the machine. This may be changed for future versions though, now that RISC OS 4 is widely available. This minor niggle aside though *NoticeBoard Pro* seems to run without problems on RISC OS 4.

Anyone who owns the original version of *NoticeBoard* will be happy to find a conversion utility that will take the old format and convert to the new one.

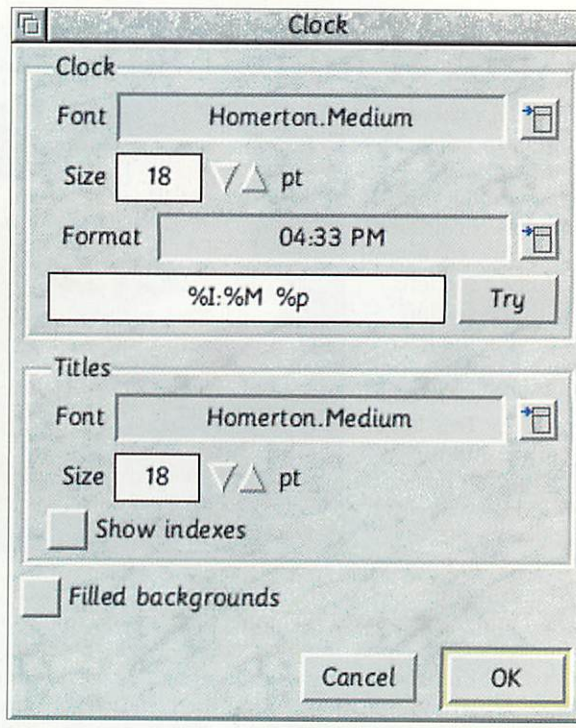



*Figure II: The clock configuration display*

Creating presentations is easily performed via the standard RISC OS drag and drop interface. There are two options here: you either create a 'pseudo' application which will hold all the recources inside, allowing you to transport it as a single item; or you can have the 'single file' option where all the resources are accessed from wherever they are on your system, but this form is not really transportable.

Once you've opted to create a new slideshow, a control window will open allowing you to set such 'global parameters' as screen mode to run in, what 'furniture' to display on each slide and which fades are available. The furniture option lets you place various additional display features at any of the eight screen

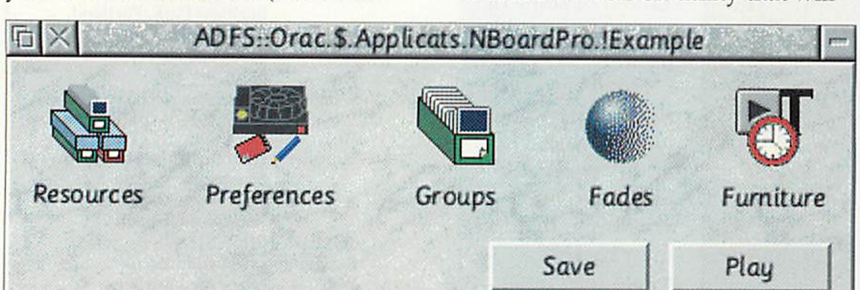



*Figure I: The Control window*

# oard Pro

positions (four corners and four sides). These include a clock, video-style controls or a variety of title/numbering options – most are user configurable. For example, you can define the font and size of the onscreen clock or titles or which video controls are displayed. The default option is no furniture, which will display the slide exactly as the original was drawn.

The main option in the control panel is the 'groups' option. This is where you can effectively define a 'carousel' containing a set of slides. A group can have a set of parameters which will globally apply to all the slides in the current set, such as background colour, time schedules and colours. You can also use an image as a background image. This works in much the same way as the RISC OS pinboard in that it can be tiled, scaled or centred within the defined screen area. Again, the width and height of the actual displayable area can be defined by the user.

As regards configuration, flexibility and ease of use, I would argue that it's certainly easier to create a presentation with this application than it is using *Powerpoint*.

Having made a group in which to hold a related set of slides, you can then create them – each group has a specific background and the slides are displayed on that background. This is where the flexibility of *NoticeBoard Pro* instantly becomes visible.

Using the usual RISC OS drag and drop philosophy you name a slide, drag in the image to use and set various parameters. On a basic level you can simply drag a pre-designed image into the new slide window and click OK. However, if you want to be more ambitious you can schedule your slide to appear to at a certain time – useful if you wish to create an unattended display for demonstration purposes.

The separate groups of slides can be displayed at random or in order, and within each group the slides can be shown at random or in order.

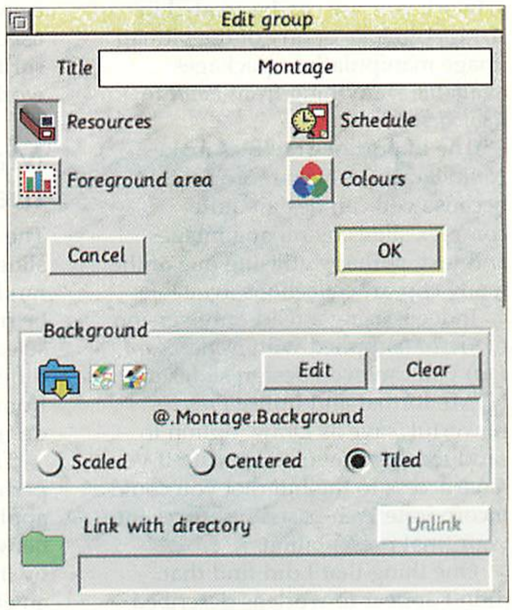



*Figure IV: The Groups option panel*

## Sounds effective

One feature which can add a new dimension to finished presentations is the ability to link sound effects to slides. This can spice up displays, especially if created with young children in mind. One of the example files contains slides of various animals. A lion's roar accompanies the drawing of a lion. This makes it ideal for use as a learning tool.

If you have a sound sampler (such as the VTi printer port sampler) you can easily produce your own sound effect resources which will drop straight into *NoticeBoard Pro*. By carefully selecting your sequence you could even provide a sound-track to your presentation. In a teaching environment, this facility can greatly add to the ability to keep children's attention focussed on the slideshow images.

To create a whole slideshow, you just follow this process, naming a slide and dragging the image into the window. The list of slides will then be built up in the slide window. You don't need to worry if you get them in the wrong order either. Not only can you easily insert or delete slides, but you can simply drag a slide from one position to another. This will swap the two slides over and works in much the same way that you would alternate slides in a real

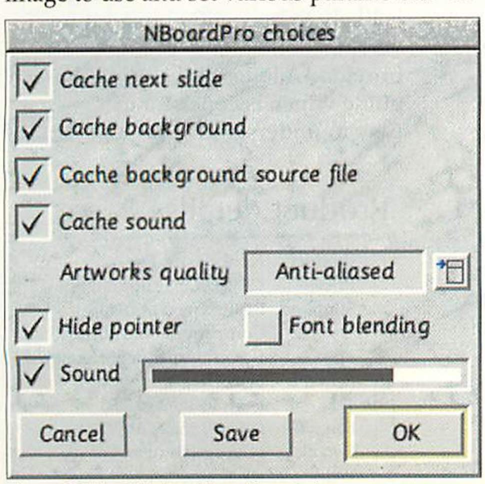



*Figure III: The Global configuration window*

slide carousel. In true RISC OS fashion, you can also select a group of images and drag multiple files into the group window in order to create a complete batch of slides. *NoticeBoard Pro* doesn't include any editing facilities itself, merely being a tool to create slideshows (although a double-click will load the selected image into a suitable editor). The artwork you use can be created in *Artworks*, *Draw* or any of the bitmap image manipulations packages available – anything from *Paint* to *Photodesk*.

The import of drawfiles makes *NoticeBoard Pro* even more flexible because you can design quite complex slides by mixing images and text, perhaps utilising one of the many clip-art collections available.

Indeed, using a read-only version of *Fresco* (supplied with *NoticeBoard Pro*) you can even design slides in HTML format and utilise *Fresco*'s powerful 'save as Draw' option to produce the drawfiles for you. If you have access to the Internet you could incorporate Web-based resources into your final presentation.

One thing that I did find that didn't appear to work as described in the manual was the range of input formats acceptable.

According to the manual, *NoticeBoard Pro* will accept *Draw*, sprite or JPEG images, in addition to those created by *ArtWorks*. Although JPEG images are not catered for natively, they should be accepted when included in a drawfile. This didn't appear to work on my copy. Whether or not this was due to my having just installed RISC OS 4 I'm not sure. However, when I converted the images using *ChangeFSI* and used the resulting sprites, everything worked as it should.

## Making the change

The transition from one slide to the next is via a random fade. This can be made from a wide selection of over 25 different effects, ranging from simple wipes to complex flower designs or Moire lines.

This is where my biggest, and perhaps only, complaint with the application lies, for the actual fades between specific slides cannot be set by the user. Each slide is faded using an effect chosen at random from the pool of fades available. You can choose which fades are used, but ultimately the actual one is chosen at random.

According to the author, this shortcoming is likely to be reviewed should a future version materialise. However, until then you'll have to accept a random one. This point aside, the program performed very well and I would have no hesitation in recommending it to people who wish to produce an effective and highly visual presentation of images. It's certainly easier to use than cumbersome applications such as Microsoft *Powerpoint*, and its simple to use interface and ease of use will make it ideal for busy teachers or for use as unattended point of presence 'rolling demos'. The only real competition provided on the RISC OS platform comes from Spacetech's *OHP* application. This doesn't have the ability to add sound samples to slides, but it does allow you to choose which fade to use for the transition between slides.

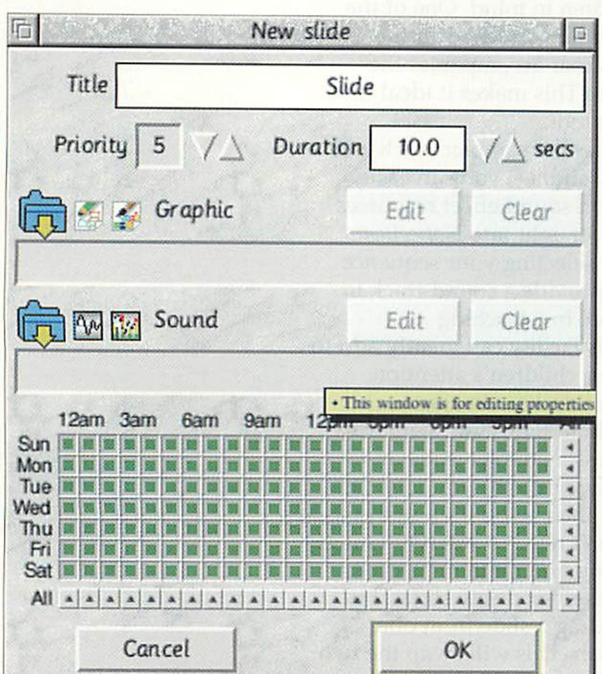



*Figure V: Building a new slide*

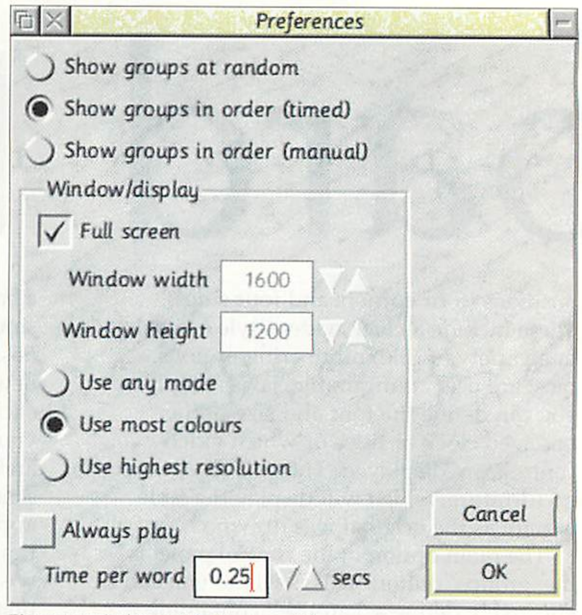



*Figure VI: The 'Group' Preferences settings showing the range of controls provided*

The main users of *NoticeBoard Pro* will probably be teachers or businessmen who want to quickly and easily create a slideshow presentation, either from their own resources and artwork, or by using freely available clip art or even Web-based information.

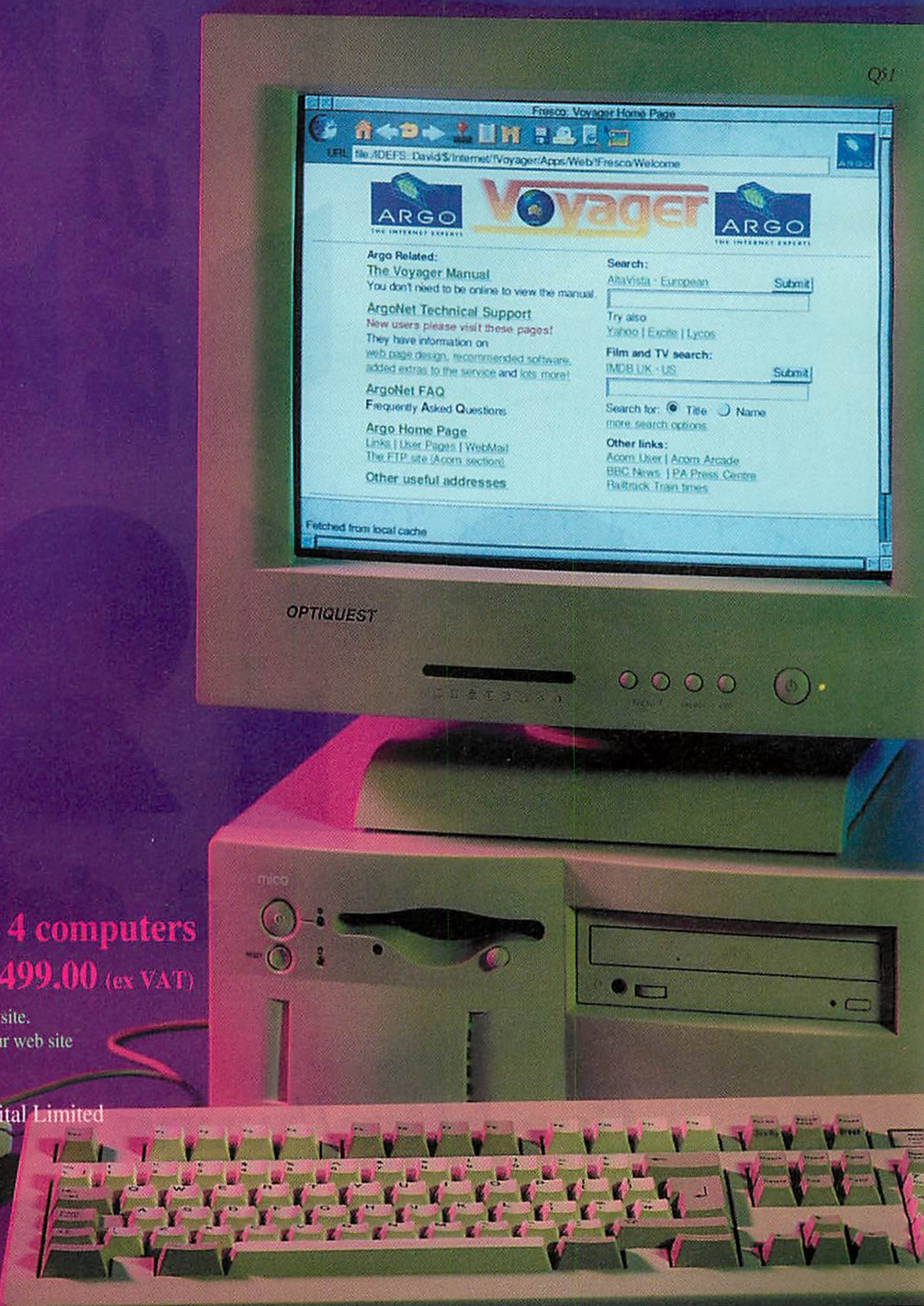
They should find no problem creating impressive-looking demonstrations within minutes of installing the software. It's comprehensive, yet clear and easy to manipulate.

The only real drawback is the lack of choice which selecting fade effects between specific slides, although this is likely to be rectified in a future version. Some demo examples are provided, along with a printed user guide which is concise and easy to understand. **END**

### Product details

| | |
|---|---|
| Product: | Noticeboard Pro |
| Price: | £29.95 (£15 if upgrading) |
| Supplier: | Really Good Software Company, 39 Carisbrooke Road, Harpenden, Herts AL5 5QS, UK |
| Tel: | (+44/0) 1582 761395 |
| Fax: | (+44/0) 1582 761395 |
| E-mail: | sales.rgsc@argonet.co.uk |
| Web: | www.argonet.co.uk/rgsc/ |

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# Composing with Mr Bond

*Walter Briggs puts on various masks*

Computers are tools for accomplishing all kinds of processes – and humans just love to manipulate their environment. So *Composition* from Clares is just the program to allow you to indulge your wildest dreams. I am speaking metaphorically of course – I'm talking of creating fantastic collages using all manner of imagery.

Composition is a totally bit-map-oriented program, but can import vector images and once they are suitably arranged, they can be transported into the bitmap world. So images from *Draw*, *Artworks* and so on, are welcomed. Once within the realms of the program, and in bitmap format, your images can be pulled, pushed, resized, masked, blended and illuminated – until they are altered beyond recognition.

All of your images can be re-stacked, brought forward, sent back and re-shuffled since each one is floating over the canvas – not fixed. *Composition* was also one of the first bitmap programs on the Acorn platform to incorporate eight-bit masks. And it is here where it really comes into its own. There is only one possible drawback – the fact that you are adding a number of bit-map images, means that the file will quickly become very large. There are a couple of solution; Clares produces a good 'virtual memory' program; or better still, invest in more RAM while prices are low. This is a review but for demonstration purposes, I will be using some of the imagery from previous articles and especially Mr. Bond.

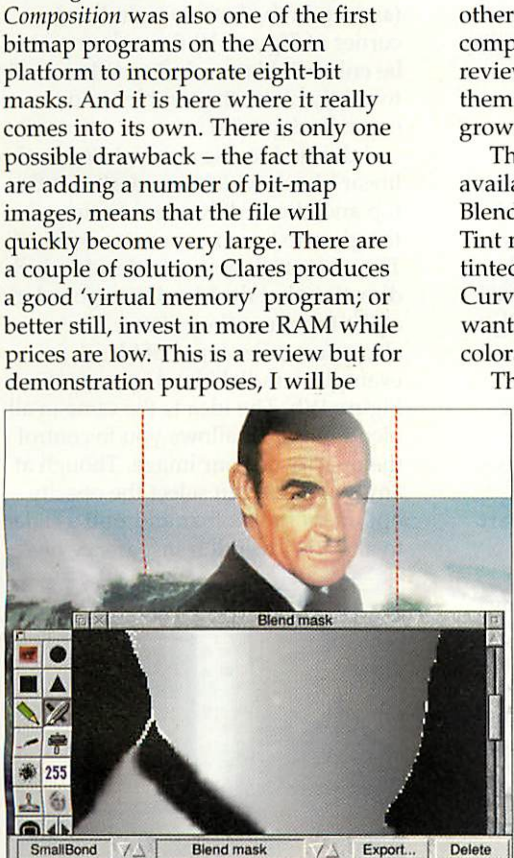



*Figure I: Mr Bond's mask window*

## Fading image

In Figure I we can see the mask window overlaying Mr. Bond – this is the master manipulator of 007. *Compositions* forte lies in its use of masks. This allows the interaction of numerous images within the canvas window. There are of course many other options to apply to your composition, and since this is a review, I will try to cover most of them – including PCA (an applet of growing taste).

There are five types of mask available for each image in *Compo*: A Blend mask, controlling the opacity; a Tint mask, which allows you to add a tinted effect to your image; and a Curve mask that appears when you want to alter the Gamma curve – the coloration of your image.

The ability to create shadows for any of your images is made possible with the Shadow mask. By default, the shape of the objects within the Blend mask is used for the shadows, but an individual shadow mask can be created and manipulated to suit your tastes. Last, but not least is the Displacement mask, which allows the distortion of an image according to the amount of grey levels within it.

In the foreground of Figure I is the blended and masked silhouette of 007. The mask is a highlight/linear fill, which can be controlled by sliders, as in this case, to allow the light point (white is opaque – black transparent) to be central to the image, and so allow it to blend into the background on either side.

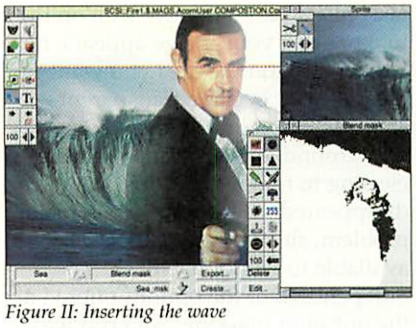



*Figure II: Inserting the wave*

At the bottom of this image is the Mask Toolbar, in this case for the Blend mask. The Blend mask can be chosen from a list of pre-set options, which opens when you choose a new mask. This allows you to choose the type of mask you want to apply to your image; here it was a modified linear one. At any time, you can switch between object and mask, with the current one visible in the display field.

You may wonder why Bond's collar is black in the mask window. This is because *Compo* allows the easy removal of unwanted backgrounds;




*Figure III: Adding text*

Figure IVb: A radial blend mask

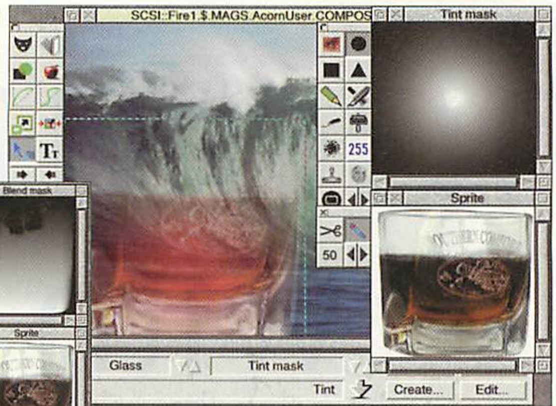



Figure IVa: Adding the glass



but the process can also remove (make transparent) areas that need to be seen, since it selects a global colour. To remove unwanted areas, you need to see your original image. Clares has made this a very simple task; just click on the Eye icon on the tool bar and your image appears, next Adjust-click on the area you want to disappear or become transparent.

In the Bond image, the white background was unwanted, but in electing to remove this, his collar disappeared as well. This is no major problem, since there are tools available to work on a mask, independent of the options offered at the outset of masking. All I did was spray white pixels (you can also spray black pixels) over this section, and gradually, with the lavish use of the various blend options, the collar gently re-emerged.

## Sea-ing clearly

The next picture to be worked on (Figure II) had been introduced first onto the canvas, this was a photograph of an ocean wave – a powerful image I wanted as a backdrop to 007.

This picture was not tall enough to fill the canvas, but re-sizing is one of the simplest tasks, *Compo* just calls up *ChangeFSI* and the ocean is re-scaled to fit the page. It is also possible to flip, trim and align images on the page. Compo also supports OLE (object linking and embedding) which means, with a Control+double-click your image can be transported into your favourite paint package for any updates. The reason for this option is that while you can control the opacity of your image with all kinds of masks, you cannot edit the actual image itself. The only drawback with OLE is that all work on your masks is lost. Of course, if you don't have a good art program, PCA (more later) could be your next acquisition.

This second screenshot shows the sky being removed with the click of a mouse button, and any distortions were airbrushed back. After this work, I realised the scene looked better with the sky. All these changes are dynamic – seen in real time, updating any changes as you work.

The window in the top right is another view of the scene you want to mask – here is where you click on any unwanted sections, to make them invisible.

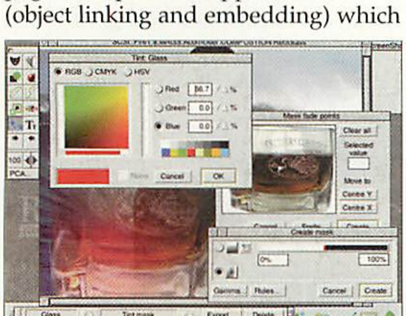


Figure V: Tinting the glass

## Stirring shadows

In Figure III, text has been added and given a pseudo-3D shadow. In fact, *Compo* deals with this feature very well, and the shadow can be easily altered to suit. You can choose your own shadow colour, which is really a tint, and it changes to accommodate the background colour. In addition, because the text is aliased, and the pixel colour of the shadow is calculated on a pixel by pixel basis – it means the shadow is altered to match the shaded colour of any part of your background.

With this pseudo-3D effect, the shadow can appear to be cast along the ground. Also this simulated shadow can be manipulated further by allowing you the option to alter the X sheer and Y shrink – this simply means you can alter the length, angle and shape of the shadow.

The text is entered into its own box and is available in any font that you have; and like so many other features, the text can be changed at will. Figure III shows how text is created, the colour, font, style, size and so on. It is also possible to alter the wording at any time by opening the dialogue box, making the modifications and clicking on the change button. A shadow is easily added, and can be designed to give the impression of light from most angles.

Because the text is set within certain borders, it is sometimes necessary to increase the parameters of the text area to accommodate a particularly long shadow. You can increase the surrounding area of the text using the trim menu, simply right click on the bump arrows to create a negative value and enlarge the boundary round the text.

In Figure III, I have increased the righthand side of the text box to allow the shadow to extend to the right. You may notice an added toolbox on the left side of this window – PCA tools – a small applet of image editing tools added to *Compo* for work on any of the images that need a little enhancing. These plug-in tools are described at the end of the article.

## Blended malt

Now we come to the fun part: It's time to add the glass to the crashing waves – of course slightly shaken but not stirred. The original glass was already a dark shade, tinted with red, (as seen in the bottom right hand corner of Figure IV) this colour would be enhanced later – but now I wanted to subtly blend the tumbler into the ocean background.

I decided to use a straightforward linear blend, which was darker at the top and allowed the clear section of the glass to become more transparent. The sliders allow you to decide which direction that the blend is to go – dark at the top, or at the bottom. You can also select other types of blend; for example, a radial blend, as seen in Figure IVb. The idea is the same in all blend masks; it allows you to control the opacity of your image. Though at any stage you can select the opacity option on the toolbar and pull a slider to alter the overall transparency of a



Figure VI: Editing the mask

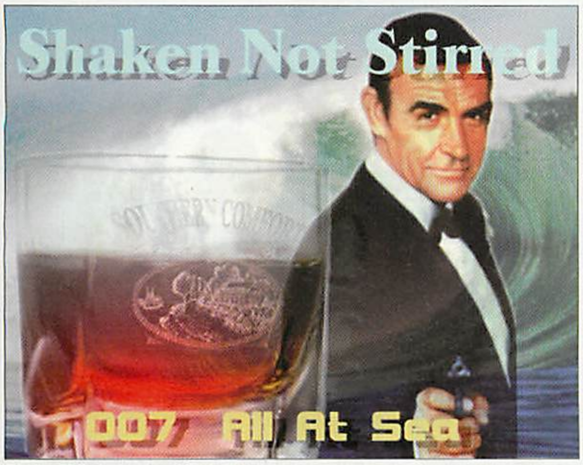



*Figure VII: A simple collage*

particular image.

Figure V shows a bright red tint being applied to the contents of the glass. When selecting the tint mask it is again possible to see the sprite you are working on. Here the original glass, which appears in the window on the right, has a white dot in the centre – this represents the centre of the applied tint. It is still governed by the radial blend that was applied earlier, so now the tint radiates out from the centre of the circular tint mask. It is possible to move the position of the tint, by Control+ dragging the centre of the mask around. It is also possible to have more than one point of tinted light.

## Glass agent

It was of course always my intention to introduce Mr. Bond into the scene, and probably behind the glass. Figure VI shows the needed adjustment to the mask to allow his weapons to show.

It was the blend mask that needed to be altered to create more opacity to glass, and especially to the base of the tumbler.

There are number of tools that can be used to work on the mask – brushes, spray cans, drawing tools, to mention just a few. I simply sprayed black over the section I wanted to make invisible and gently blended the edges to allow a softer transition. It's often good to blend the mask since sometimes your image can have a ragged outline, this can be smoothed completely away with such options. I wasn't happy with this composition since Mr. Bond's face was cut through by the top of the glass. I decided it was time to move the special agent to another locality.

## Bonded whiskey

Though this simplistic collage (Figure VII) held a measure of dynamism with the wave and glass, I wasn't completely happy. I felt the whole scene needed a complete transmogrification. First I flipped the ocean horizontally, and moved it so the crashing wave appeared to be pouring into the glass.

Mr. Bond was hustled right, and some new text added. You can see by the lower legend how well the anti-aliased shadow works on various colour combinations. Though this composition worked reasonably well, I still wasn't happy with the impact of the image. What it needed was the addition of some more points of interest – old Connery just wasn't enough – sorry girls!

At least I could add more liquor – in the form of the bottle from the second article in my series. A new sky complete with planet was warped in, along with a metallic podule and suitable 007 text – it made a world of difference. There was still a bit of work to do; increasing the contrast of certain images, brightening colours – all done within *Compo*. The package has a number of Special Effect options which allows most enhancements to be made. What *Compo* lacks are Creative, Editing and Painting tools for the images, not just the masks – until now that is. Enter PCA.

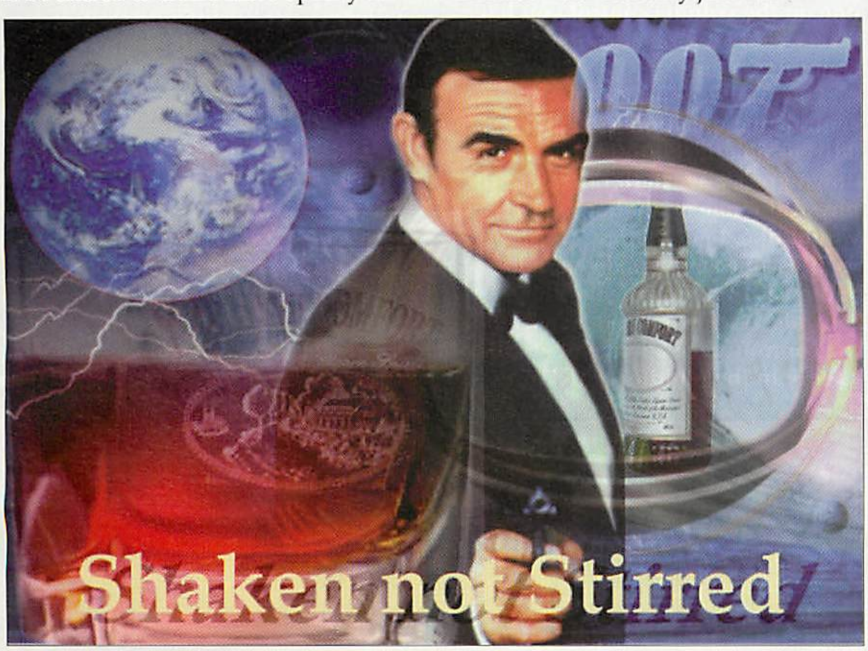



*Figure VIII: A more complex collage*

## Tools on tap

The idea of having a set of special effect tools attached, and available for almost any program that contains images, is a great idea. But what if that program also doesn't need to know anything about the attached tools or the work they do? That's PCA.

PCA is a plug-in system which allows objects to be shared between applications. Graphic objects in *Compo*, or other software supporting PCA, can be edited using PCA applets, which are plug-in tools that can manipulate that type of object. In fact each of the tools is a separate program running on the machine and can provide their capabilities to any program that uses PCA.

This PCA plug-in system allows images and masks to be edited outside *Compo*, without actually moving them out, in a variety of ways. It is designed to be an open, extendable protocol so that plug-ins written for it, can be used with any program that supports the protocol.

To sum up, *Compo* provides a powerful, yet straightforward means of creating dynamic compositions from a variety of images. Now with the availability of these PCA applet tools, the main criticism of this Clares product can be erased. These add-on tools which allow 'in-program' editing is just what the package was crying out for. Look out for a 'Preview' of PCA in the near future. END

### Product details

| | |
|---|---|
| Product: | Composition |
| Price: | £75 (on offer, usual price £99.95) |
| Supplier: | Clares Micro Supplies, 75a Webbs Lane, Middlewich, Cheshire CW10 9DS |
| Tel: | (+44/0) 1606 833999 |
| Fax: | (+44/0) 1606 836111 |
| E-mail: | sales@claresmicro.com |
| Web: | www.claresmicro.com |

# Getting balanced

*Mike Cook adjusts his frequency amplitudes for better effect*

Let's face it, when it comes to computers, sound has always taken second place to graphics. In fact second place might be pushing it somewhat. The tiny speakers fitted to most computers have always ensured there is a market for external ones but surprisingly they are still a minority purchase and, even if bought, they are seldom used.

I know I don't use them much because of the trouble of where to put them, remembering to power them up separately, and the general reluctance to have a powerful beep blasting out at you with every syntax error.

Nevertheless there are those whose main use of the computer is enhanced by good sound, not only games players but also musicians. When my son Alec, who is studying music for A-level set his eyes on the 3D Surround sound *Equaliser* he was drooling over not only the prospect of enhanced sound but also the *cool look* of the thing.

This unit has been designed for the mass PC market and as such is built in sufficient quantities to be affordable. It is the same size as a CD player and fits in a standard slot. This means it is ideal to fit into a Risc PC although you might need a two-layer one if you already have a CD-ROM fitted. There is an Acorn-specific back panel which fits in place of a standard podule with a slip of paper saying how the plugs are labelled wrongly.

You have a high and low level input with a slider switch to select between them, plus a speaker output and microphone input. All these are on 3mm jack sockets. Round the front is a headphone socket and microphone input again all on 3mm jacks. The equaliser has a disc drive-type power socket that you can plug into a spare power loom. However, if you have another sort of RISC OS machine fitting might not be so straightforward. Essentially you would need an external disc drive case and power supply.

The business end consists of a main volume control, seven graphics equaliser sliders and a microphone input level slider. Either side of these is a red 10-bar LED display; coupled with the green LEDs on the sliders and a red one on the volume control you have a very cool looking addition to your computer setup.

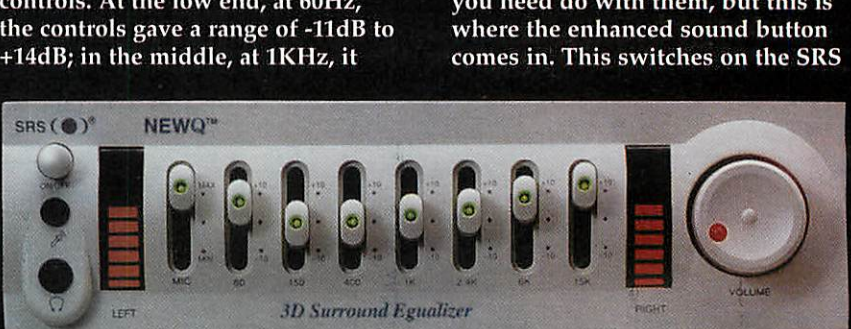
The graphics sliders have a central click position indicating 0dBs or no effect. Sliding up and down gives a +/- 10dB range but the physical range is smaller than I would like. I got out my oscilloscope and signal generator and measured the range of the controls. At the low end, at 60Hz, the controls gave a range of -11dB to +14dB; in the middle, at 1KHz, it ranged from -9.5dB to +16dB; and at the top end, at 15KHz, it went from -11dB to +11dB. So not exactly consistent across the range but they gave mostly the range they should.

The frequency response however drops off a little too soon for my liking, by 100Hz it was nearly 3dB down and this had dropped to 6dB by the time 60Hz was reached. I suppose this is partly compensated for by the extra gain in the lowest equaliser control, but it means a flat setting of the controls does not give you a flat response which somewhat defeats the object of the graphics nature of the beast.

When setting up any graphics equaliser the sliders end up looking like some sort of a smile, albeit crooked. An upside-down smile is definitely wrong and there is enough range on these sliders for it to sound very wrong as well.

## Does it work?

Yes, very well indeed, and the pulsating left/right volume bars look very flash. However, once you have set the controls for your speakers/room there is little else you need do with them, but this is where the enhanced sound button comes in. This switches on the SRS



surround effect, I don't know what that stands for but the practical effect is that the sound is made larger and fatter. It sounded like a bit of reverberation and does definitely improve the sound accompanying any arcade game. Explosions have more boom, guns have more zip and peeongs are peeongier.

I am not so sure about enhancing music, yes it's more expansive but a composer really needs to be in control of any reverberation effect as the ears quickly tire of the full-on effect this box gives, thus reducing its impact, I suppose that's where the off button comes in. Nevertheless it sounds impressive when first switched on, making a much bigger sound.

I can't see how it can give a true 3D effect as this is really a physical-acoustic effect that places a sound anywhere. That includes not only left and right but up, down, front and behind. This is done by subtly modifying the volume and phase of a sound between the left and right speakers. It's something that can't really be tagged on afterwards but has to be an integral part of the initial sound.

'Real' surroundsound is a very subtle effect and I have heard some convincing demos such as helicopters flying round the room, however most of the time I find it difficult to spot the effect. I did visit the surround sound room in the Sheffield Museum of Popular Music. That was in a circular room with 18 very large speakers, but most of the time the sound appeared to be coming from over my right shoulder. So, at best, you can call the Equaliser pseudo-3D.

Anyway I dragged out the 'scope to see what it was doing to a simple sine wave. Pressing the effects button made a righthand mono signal appear in the left side as well but reduced in amplitude and phase-shifted. The phase-shifting altered with frequency which shows it is doing something.

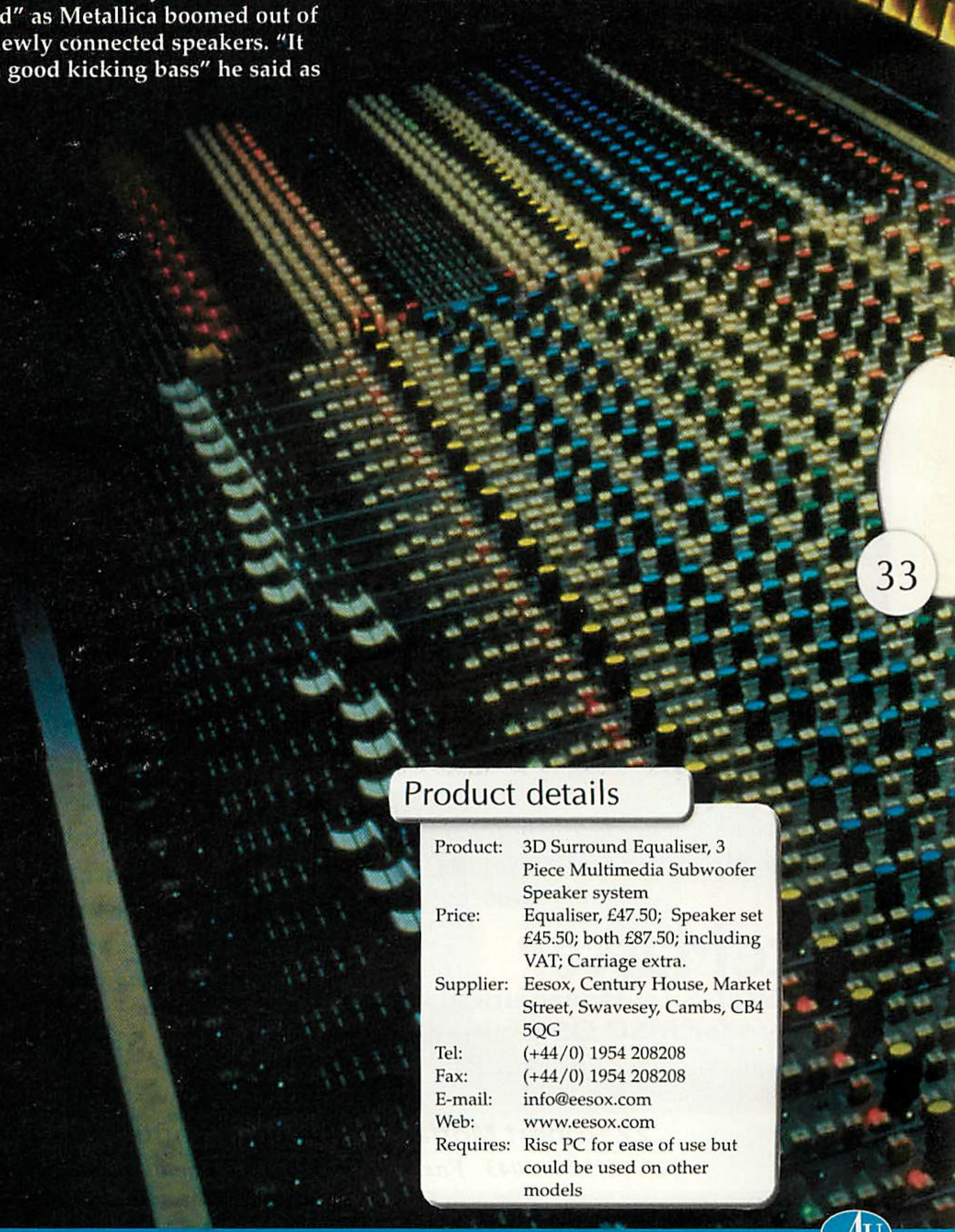
Whatever the merits of true 3D sound this processor did give a feeling of being immersed in the sound rather than having it thrust at you, so I guess it was doing its job.

Although this is a piece of hardware designed for a PC, Eesox have provided a RISC OS desktop application to control the volume as well as an information sheet detailing how to set it up with the innards of a Risc PC. I had the graphics equaliser a few weeks before the second part of the package arrived, the three piece subwoofer speaker system. The idea is that at low frequencies your ears are not sensitive to the direction of the sound so you can have that coming from a central speaker. Two other speakers provide the conventional left and right sounds.

Woofers are the name given to speakers handling the lowest frequencies and sub-woofers handle frequencies that are in theory too low to hear. The idea being that low frequencies are more felt than heard. By this definition it's not a true sub-woofer because, according to the box, its frequency response only goes down to 50Hz, something you can hear. The effect however is quite pronounced, Alec said "That's the way music should sound" as Metallica boomed out of the newly connected speakers. "It has a good kicking bass" he said as he picked up his bass guitar and played along. The side speakers, however, gave a bit of a thin sound at times, I thought.

On the technical side each of the side speakers gives 3W output with 10W from the sub-woofer itself. These are also magnetically shielded so that you shouldn't have any problems when placing them close to your monitor, not that you would want to anyway. One of the side speakers also has a power switch/volume control and a bass and treble control. This is a bit redundant given a graphics equaliser, so many combinations of settings can give the same sound.

The equaliser and speakers are sold separately but together they form a good combination not only in sound but looks. It looks cool, it sounds cool – sorted. END



## Product details

| | |
|---|---|
| Product: | 3D Surround Equaliser, 3 Piece Multimedia Subwoofer Speaker system |
| Price: | Equaliser, £47.50; Speaker set £45.50; both £87.50; including VAT; Carriage extra. |
| Supplier: | Eesox, Century House, Market Street, Swavesey, Cambs, CB4 5QG |
| Tel: | (+44/0) 1954 208208 |
| Fax: | (+44/0) 1954 208208 |
| E-mail: | info@eesox.com |
| Web: | www.eesox.com |
| Requires: | Risc PC for ease of use but could be used on other models |

# Golden oldies

*Alex Macfarlane Smith takes a look at four games from yesteryear*

All being well, a selection of patches to make a whole host of older games function correctly on the latest StrongARM Risc PCs will be on the quarterly CD and downloadable from our website.

## Cataclysm

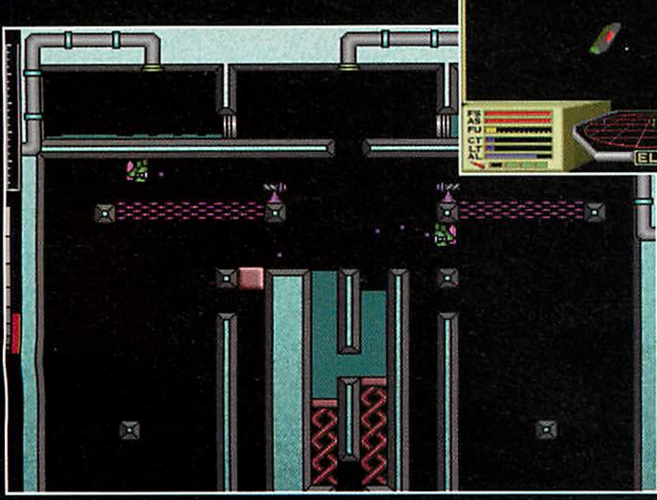
The object of *Cataclysm* is basically to get all of the liquid from the top of the screen to the bottom. Simple, eh? It's actually more difficult than it sounds, as the liquid has to fall into the collector at the bottom – any liquid that doesn't fall in reduces the amount of time you have left on the level, which means you have to place blocks in the right places to make the liquid go the right way.

This is made even more difficult on later levels because there are different types of liquid; acid is fatal on contact, and the blue and yellow liquid must be mixed before being collected, plus the puzzles become more fiendish.

You have to look very carefully to make sure that the water will definitely get to the collector before releasing it, this is made even more difficult by various valves, dissolving blocks and remote control doors. There are also guns and aliens which will either try and shoot you, or follow you around as you progress. There are a total of 40 levels, so plenty to keep you entertained – some of the later levels are particularly difficult. Another feature of the game is that it also records your scores and times for each level, so you can go back and try to beat your best score and time, or compete against your friends.

The only feature that I felt would have been nice is a level designer. The graphics are quite good, you can easily see what is happening most of the time (except when you are hidden behind water). It can get a bit repetitive at times, but if you leave it for a while and go back to it, it's still very good and addictive. *Cataclysm* is great fun to play, especially if you enjoy arcade puzzle style games.

*Cataclysm* is still available from The Fourth Dimension, see their contact details in the CJE Micros advert elsewhere in this issue.



*Wild, wet fun in Cataclysm*




*Become elite with Elite*

## Elite

*Elite* has become one of the most widely known games since its release on to a number of different platforms (the first being the BBC Micro). The RISC OS version is considered by most *Elite* fans to be the best version on any platform.

*Elite* is a space adventure with a variety of gameplay which includes trading, combat and missions which involve hunting down pirates, or saving planets.

Initially you have to trade between planets to improve the specifications of your ship, and then you can choose what path you want to go down – trading, overcoming pirates, or even become a fugitive by attacking friendly ships, shooting down the police ships (Vipers) and so on. The layout of the eight galaxies are identical to the original BBC version, but in almost every other way the game has been improved.

All of the graphics use filled polygons (unlike the wireframe graphics of the original), there are now moons around some of the planets, and the varied ship routines



*A brief flashback to Flashback*

are much better – you can be flying along and find pirates attacking each other, or a transport ship which you can either destroy, or defend from attacks from pirates [lots of pirates then – Ed]. If you're being attacked, sometimes Vipers will come and help you – depending how 'clean' you are. If you are a fugitive, Vipers will actively hunt you down. Not to be recommended before your ship is of a reasonable status.

Once you have got your ship well equipped, or have the appropriate number of kills, you may be contacted by an organisation or individual to carry out one of the four missions in the game, which on completion will award you with money to upgrade your ship, or special additional equipment. The ultimate goal of the game is to have a fully equipped ship, completed all of the missions and to be Elite.

*Elite* is now freeware and was on the cover disc of *Acorn User* a while back. An updated version to run on StrongARM Risc PCs may be downloaded from the features section of Acorn Arcade by following the links from http://www.acornarcade.com/

## Flashback

*Flashback* is probably one of the best arcade adventure games available for RISC OS. The intro sequence is slick, and introduces the story line – Aliens want to take over the world. They chase you. Shoot your space bike down. They assume you're dead, but you're not. The fools.

Your first task is to find out more about yourself – as you become conscious again, you knock a holocube off a ledge, picking this up and examining it gives you information about who you are and what you should do. The eventual aim of the game is to save Earth from invasion by the aliens. The graphics in the game are excellent – the way that the characters within the game are animated, particularly the hero, are superb [I spend most of the time making him do forward rolls or pulling his gun out the holster, shooting a tree, then putting it back. It really is very good – Ed]. The backgrounds are also very well put together.

There are a number of puzzles or tasks to solve; for instance, on the first level, you must help a man get to hospital, where he will give you an ID card allowing you access to the next section of the level.

Mostly you have to run around avoiding or killing your enemies, but it gets interesting later on when you have to complete certain missions to receive credits and also take part in a gameshow to get back to Earth.

The monsters and other inhabitants get increasingly clever as you progress through the game, and you have to learn when to use your forcefield. You can be hit a maximum of four times before your shield runs out, but there are recharge points scattered throughout the levels which will regenerate your shield.

The game is spread over seven levels with movie sequences scattered throughout the game. *Flashback* is an excellent game, with a superb blend of puzzles, action and skill. Sadly, stocks of *Flashback* are somewhat hard to locate at present. The main distributor, CJE, has sold out, but keep an eye on the free ads and second-hand games advertised on the Internet newsgroups and you could get yourself a copy.

## Populous

*Populous* is a God style game, where you have complete control over all your people. The object is to build up your empire and eventually attack neighbouring tribes and wipe them out. You have a certain level of Manna which will increase with the number of people you have, and will decrease when you perform certain tasks.

Earthquakes which destroy the land and may cause people to drown, volcanoes which cause the enemy to spend time dropping the land back down to a reasonable level, swamps which people can sink into, and floods which cause the entire landscape to be dropped by one level must all be faced and survived. You need to be careful of these on later levels when the computer uses them to its advantage.

Your people are able to construct buildings, gather together to become stronger, travel to find enemies to fight, or you can create a knight who will go and find enemy walkers to kill or buildings to destroy. There are over 500 worlds in conquest mode where you battle it out against the computer – with varying levels of difficulty, and varying skills available.

Alternatively, you can just try custom mode which allows you to customise all aspects of the game – what skills good and evil can have,



*Populous – would you make a good god?*

the way the landscape looks and so on. You can then either battle it out with the computer, or watch the computer play against itself. There was to be a serial link option so that two people could fight it out between them, but sadly it was never implemented.

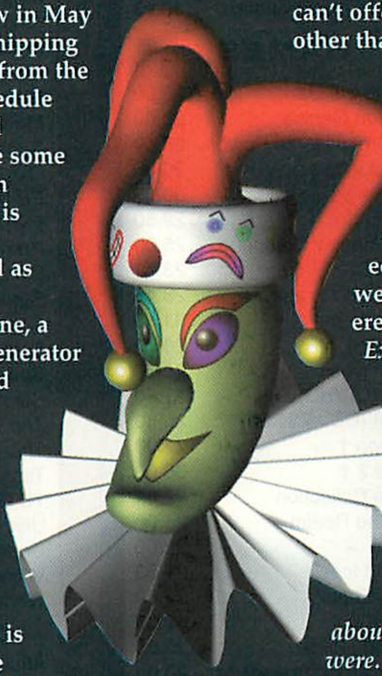
To sum up, *Populous* is a very enjoyable and varied strategy game. It may not appeal to everyone, but if you enjoy planning attacks on the enemy, or just playing God, this is the game to look for. As with *Flashback*, nobody seems to have stocks of *Populous* any longer. Keep an eye on the second-hand market if you're really keen to get hold of this one.

## News

In a break from the norm, there's actually some gaming news this month. Firstly, I bring the sad news that programming group GEK has left the RISC OS scene.

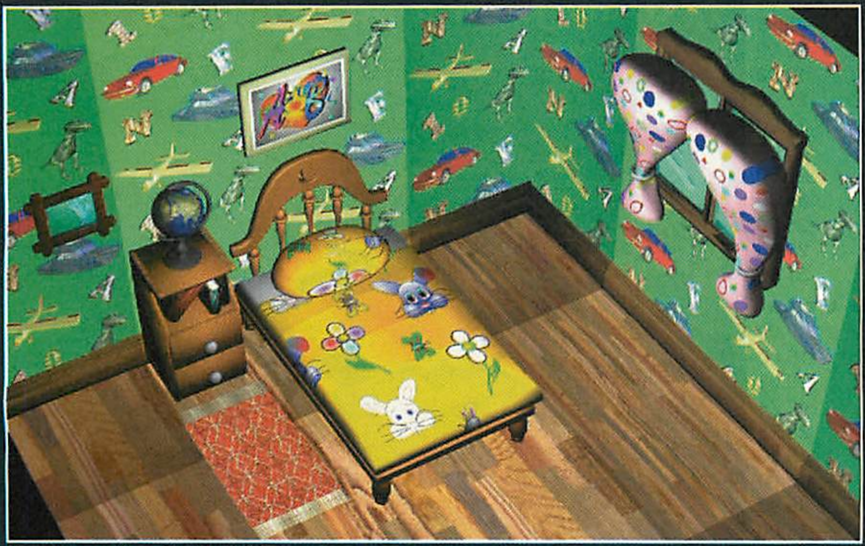
Their Website says that this is due to all of the members "buying PCs". GEK's two current projects, *ChopX* and *Sumitsu Sun* were nearing completion, so anyone who fancies taking these on should e-mail games@acornuser.com for details of how to contact GEK directly. The good news this month is that Nintendo has announced they intend to use an ARM processor in their next generation GameBoy. This isn't strictly anything to do with the RISC OS market but it does go to show that had things happened differently, ARM-based Acorn machines could have been a lucrative gaming platform. The news will mean that emulating the new hand-held console under RISC OS should be easier than those consoles which use other processors. Look out for a full emulation round-up on these pages in the next few months.

It has been rumoured that R-Comp Interactive are close to receiving their order of the *Heroes of Might and Magic 2* expansion pack, *The Price of Loyalty*. This pack was due for release at the Wakefield show in May but delays in shipping the boxes over from the US put the schedule back by several months. Unlike some other expansion packs, this one is set to add new features as well as offering new missions. For one, a random map generator is now included along with some very good music. Keep an eye out for a full review.



Another new release, *Toy Chronicles*, is also still on the cards for the new year. Billy from the Greek coding group, Fantasia Fan, posted to the gaming newsgroup to announce that the project is still being worked on but is being held back by the absence of *TopModel's* animation plug-in which was promised many months ago.

It's still hard to tell what this game will be all about, but a few examples of the stunning artwork are included this month.



*Some images from Toy Chronicles*

## Cheats

Since *Archimedes World* magazine stopped earlier this year, there's been nowhere for you no-good-cheats to send your wares for publication. Just so you know, cheats are equally welcome here but unfortunately we can't offer you any earthly reward other than having your name printed in this little 'ol mag. So if you have a cheat, level walkthrough or even a CheatMod from *Desktop Hacker*, e-mail it to games@acornuser.com or send it on a disc to the usual editorial address. This month, we have a previously undiscovered cheat for *Chocks Away Extra Missions* submitted by Keith McKillop:

*Go to practise map 'C', go into practise, pause, then hold 'I' 'E' 'T' and 'M', and press Space. With luck, it should de-pause and give you infinite speed limits and crashing will raise you about 100ft from where you last were. The necessity to refuel is also removed. Oh, and if you're on inside view when it happens, you're suddenly looking left I think, so the plane may appear to act oddly (it isn't though) until you change view.*

A second cheat this month allows progression through the devilishly hard *BotKiller 2* from Wag Software. This one was contributed anonymously and is being published as revenge on the author for using a girl's name rather than my name, as it was in the pre-release versions:

*Enter a password of 'CLAIRE' from the main menu and the text 'CHEAT MODE' will hopefully appear at the bottom of the screen accompanied by a sound sample. Once in the game, use the following keys to gain your reward:*

*keypad 1 – level skip*
*keypad 2 – all three key cards*
*keypad 3 – full ammo and weapons*

*Alasdair Bailey*

### Contacting AU

Alasdair Bailey:
games@acornuser.com

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Revision 19

# RiscStation 1999 2000

**RISC OS compatible products for the new Millennium**

# RiscStation 1999 2000

**RISC OS compatible products for the new Millennium**

## CONTENTS



## NEWS

### NetWORX And R7500 Lite Now Shipping



Following the delay of a vital PCI component back in August the PCI-less projects, originaly scheduled for release during the first quarter of 2000, have been brought forward for release before the R7500 and are now ready to find their way into many happy customers' homes and businesses. Initial feedback from customers on the NetWORX and R7500 Lite is extremely encouraging.

*"RiscStation would like to thank our customers for their comments, we look forward to entering the new Millennium with you."*

Projected sales figures are high and just as importantly, interest from the United States (bearing in mind no marketing whatsoever has been undertaken there) indicates a further increased user base for the new Millennium.



When the prototype units were being tested the technicians found that the power consumption was so economical, they could run one on just three AA sized batteries! That's little more than most TV remote controls!

## NEWS

### R7500 Evolution

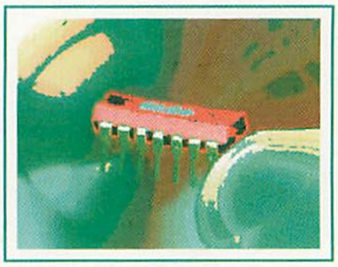



The advanced release of the NetWORX and R7500 Lite computers has allowed the R7500 PCI variant to be completely re-designed to achieve maximum performance, for those users who require even more power. Due to these major re-designs the RiscStation R7500 has been renamed **"PCI PROJECT"** and has swapped release dates with its PCI-less brothers.

*"The PCI PROJECT is expected to be completed by early 2000."*

## NEWS

### 64bit PCI and Mega I/O for PCI PROJECT!



RiscStations hardware partners are currently producing new silicon to allow the PCI PROJECT to use an enhanced PCI based I/O chip in place of the current super I/O processor. This results in vastly improved I/O over the original R7500 and previous RISC OS compatible systems.

It is also envisaged that 64bit PCI will be a part of the PCI PROJECT as standard. This will result in an I/O bandwidth of a superior 264Mb per second. This bandwidth makes possible the use of the latest in PCI cards such as the new Simtec multi-processor boards, Gigabit Ethernet interfaces and the latest RAID controllers.

# RiscStation 1999 2000

**RISC OS compatible products for the new Millennium**




## NetWORX

## SPECIFICATION

From £399 + VAT

56 Mhz ARM7500FPE (with integrated floating point co-processor)

RISC OS 4

8/16Mb 60ns EDO System Memory

6Mb Flash Memory containing RISCOS 4 and Utilities

Micro ATX Desktop Configuration

PS2 Style Keyboard Input
PS2 Style 3 Button Mouse Input

2 x Serial Port **Rated at 460k baud*
2 x PC Style Game Port supporting Midi In/Out/Through
2 x High Speed EIDE Ports **Supporting up to 4 devices*
1 x 10baseT Network Port with Wake On Lan Support
1 x EPP/ECP Fast Parallel Port
1 x IRDA Infrared Interface Support
1 x High Density Floppy Drive Port
1 x 15Pin VGA Connector

Full 16Bit OPL3 Stereo Sound Sampler & Mixer with FM Synthesizer, Midi, Wavetable and 2 CD Mixer Ports
3 x 3.5mm Jack Sockets for Line in/Mic In/Headphone & Speaker Out

ARM POWERED

RISC OS 4

Network Ready

Free Software

# RiscStation 1999 2000

**RISC OS compatible products for the new Millennium**




## R7500 Lite

## SPECIFICATION

**From £499 + VAT**

56 Mhz ARM7500FPE (with integrated floating point co-processor)

RISC OS 4

16Mb 60ns EDO System Memory

4.3Gb EIDE Hard Drive

48X Atapi EIDE CD ROM Drive

6Mb Flash Memory containing RISCOS 4 and Utilities

Micro ATX Desktop or Mini/Midi Tower Configuration

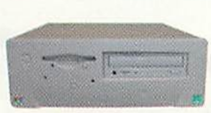
Minimum 60 Watts External Stereo Speakers

2 x Serial Port **Rated at 460k baud*
2 x PC Style Game Port supporting Midi In/Out/Through
2 x High Speed EIDE Ports **Supporting up to 4 devices*
1 x 10baseT Network Port with Wake On Lan Support
1 x EPP/ECP Fast Parallel Port
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3 x 3.5mm Jack Sockets for Line in/Mic In/Headphone & Speaker Out

PS2 Style Keyboard Input
PS2 Style 3 Button Mouse Input

ARM POWERED®



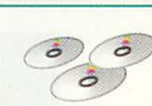
Available as Desktop

RISC OS 4

Network Ready



Free Speakers



Free Software

## R7500 Lite SOFTWARE

RISCOS 4, the operating system of the R7500 Lite, comes with applications built in. A personal organiser, text editors, drawing applications and music software can all be found as part of the RISC OS 4 package. As well as the standard installed RISC OS 4 software, there is a bonus CD with even more too! Games, demo's, graphics and utilities can all be found on here.

As well as software that acompanies RISCOS 4, every R7500 Lite will arrive with a top selection of software preinstalled ready to use. Whether you want to work or play, there are programs for everyone on the R7500...

A great graphic design package that comes with a complete set of 2100 fonts and even a set of over 1000 clips to use with your designs! With a host of graphic enhancers as well as a complete font editor, DrawWORKS Millennium is a great tool for that creative job.

DrawWORKS Millennium
Designed for the real world
© iSV products 1999

EasiWriter Professional is quite simply a brilliant Acorn compatible word processor. As well as being extremely user friendly, it can utilise the many fonts supplied with DrawWORKS Millennium. Combine this with MS Word compatibility, the European spelling checker and the many utilities found in this professional package, and you have a strong stand alone word processor.

Fireworkz Pro is a versatile office suite consisting of a word processor, a spreadsheet application and a database editor. A great all in one office package that is well laid out and easy to get to grips with, Fireworkz is a great solution for home office or business alike.

PipeDream 4.5 by COLTON software

Back by popular demand, PipeDream is best described as an open plan office utility. Create a letter, a spreadsheet or a new database all in the same program, easily. A great introduction program for children due to the simple layout, yet a very able program never the less.

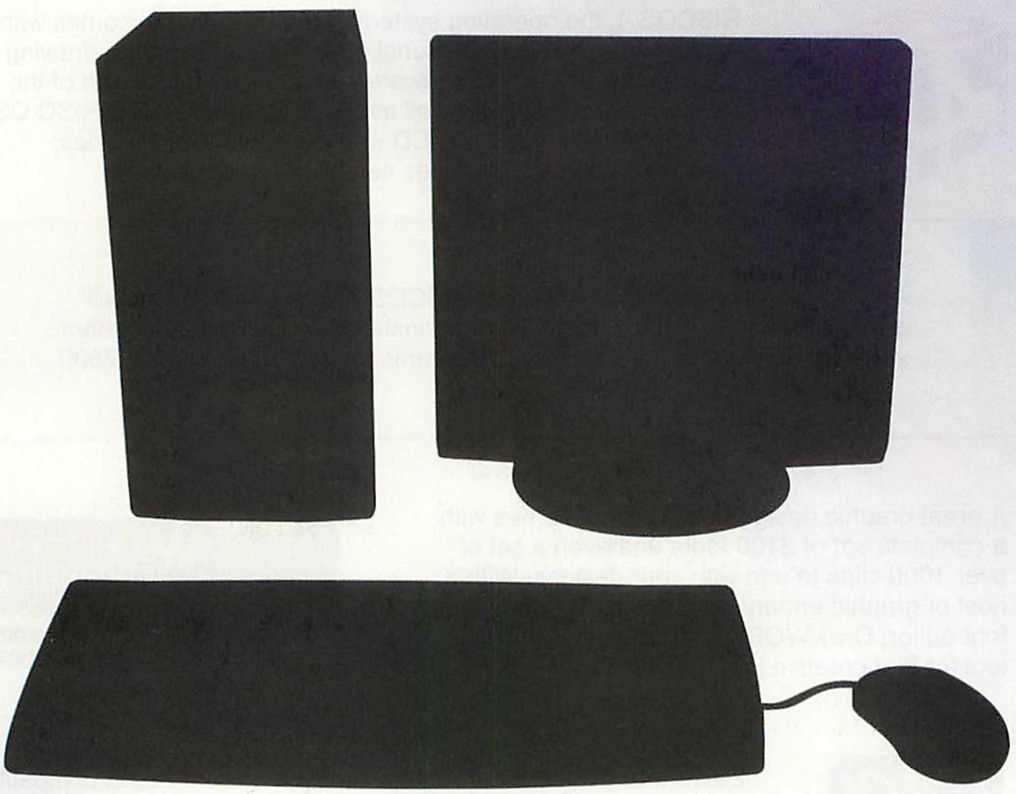
Aside from the serious applications, RiscStation have installed a selection of games in the GAMEZONE. Ankh, Botkiller and the nostalgic Frak! can all be found here. Also a selection of shareware and demos of up and coming titles can be found in the DEMOZONE, another place to visit if your seeking fun and games!

DEMOZONE



GAMEZONE

*Even more titles to appear soon.*



## PCI Project

## SPECIFICATION AS OF AUTUMN '99

£TBA

Minimum 56 Mhz ARM7500FPE (with integrated floating point co-processor)

RISC OS 4

Minimum 16Mb 60ns EDO System Memory

Minimum 4.3GB UDMA Hard Drive

Minimum 48X Atapi UDMA CD ROM Drive

6Mb Flash Memory containing RISCOS 4 and Utilities

ATX Desktop or Tower Configuration

Minimum 60 Watts External Stereo Speakers

Enhanced 64bit PCI Bus
2 x Serial Port *Rated at 460k baud*
1 x PC Style Game Port supporting Midi In/Out/Through
2 x UDMA/ATA66 IDE Ports **Supporting up to 4 devices*
1 x 100baseT Network Port *Optional
1 x EPP/ECP Fast Parallel Port
1 x High speed Infrared Interface Support
1 x High Density Floppy Drive Port
1 x 15Pin VGA Connector

Full 16Bit OPL3 Stereo Sound Sampler & Mixer with FM Synthesizer, Midi, Wavetable and 2 CD Mixer Ports
3 x 3.5mm Jack Sockets for Line in/Mic In/Headphone & Speaker Out

PS2 Style Keyboard Input
PS2 Style 3 Button Mouse Input

ARM POWERED


Available as Desktop

RISC OS 4

Network Ready


Free Speakers


Free Software

# PCI PROJECT UPGRADES

Returning to the original R7500 designs and enhancing the PCI Bus and other areas of the motherboard has presented us with the ability to use very fast PCI card upgrades, the likes of which would not have been as functional on previous designs. The new PCI PROJECT will boast a 64bit PCI Bus for a bandwidth of around 264Mb per second, more than enough for most PCI upgrades.

**StrongArm Upgrade** - Upgrade to the faster StrongArm processors for increased power under general operation and for an overall quicker performance.

**MultiProcessor Upgrade** - Available with between 2 and 8 processors installed. Up to 3 cards can be used in any one machine, totaling 24 StrongArm processors! Powerful multithreading useful for many an application.

**PC Card** - Plans indicate the use of on board memory, and the ability to utilise up to a 500Mhz processor, and beyond. PC Cards have NEVER been as powerful.

**32bit SCSI Card** - Up to 15 high speed devices can be connected to the R7500 via this low cost, high performance card. SCSI Scanners, Hard Drives, Removable Drives, CD Writers and a host of other devices will be available to the RiscStation user.

**100baseT Network Card** - For increased performance over a network, this card can be added to the R7500's PCI bus enabling faster transfer between systems.

**USB Port Expansion** - USB, the new multipurpose port available to PC systems for some time now, will be available for the RISC OS user. WebCams, Digital cameras, and an increasing range of products can be connected via USB to the PCI PROJECT.

**Internal 56k & ISDN Modems** - Connection to the internet will be possible via an internal modem. Connecting the modem to the internal PCI bus results in a faster data transfer from modem to computer as well as cutting out the need for a bulky external box, a neat solution for the internet user.

**3D Graphics Accelerators** - Soon the RISC OS user can experience the power of a 3D accelerator card. Enhanced 3D gameplay in high screen resolution will be possible on the R7500 with this breed of card, as well as the possibility of special lighting and smoke effects being added real time to an intense 3D game.

**ATA 66 IDE Upgrade** - An extremely fast IDE expansion catering for those people wanting more low cost yet high speed IDE devices. More Hard Drives, CD ROMs and the like can be attached with this upgrade for very little expense.

**MPEG Decode/Encode** - MPEG encoded movies decoded on a RISC OS machine quickly for high quality entertainment and presentational purposes will soon be a reality with this upgrade. As well as this, the ability to encode your own material in high quality MPEG format should be possible with this exciting project.

*"PCI, the future of RISC OS computing."*

RiscStation
Risc Based Technologies

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# Psion Series 5MX

## *Ian Burley sees some improvement*

Psion's Series 5 hand-held computer has been around for just over two years. It has always had much to tempt an Acorn user as, sentimentally at least, it's a British design using an ARM processor. Like RISC OS, the Series 5's powerful in-house developed operating system, EPOC, is staunchly Wintel-independent.

The Series 5 is a stylish and innovative product, but it's by no means perfect. Now Psion has introduced a face-lifted model, the Series 5mx and it successfully addresses many, if not all, of the original's faults.

Ask a seasoned Series 5 owner what they would like Psion to improve and the list would inevitably include a clearer, brighter screen, more memory, slightly less lethargic applications, integrated Internet support and a case finish which didn't start to flake and peel after a few months.

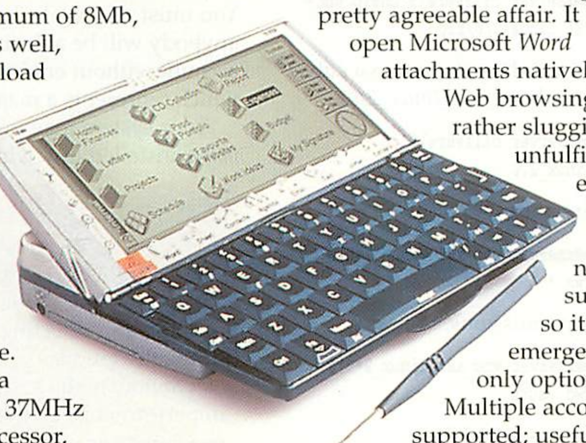
The new mx does have a revised screen – well, according to Psion at least. Compared to a fairly new standard Series 5 I couldn't see any difference. Because of the touch screen laminate, the screen remains lacking in contrast, especially in dim light. However, I suspect that all more recent Series 5s, mx or otherwise, have slightly improved screens compared to original models. The backlight is different, however. It's no more brighter than before, but it doesn't buzz like the old one and Psion says it uses about a third less power.

16Mb of system memory is now standard compared with the previous maximum of 8Mb, which is just as well, because if you load various options, like the Java add-in – which consumes 3Mb on its own, 8Mb would be barely adequate. As the mx has a speed-doubled 37MHz ARM 710T processor, applications are notably faster. For example, one particular address database search used to take 5 seconds to locate 55 records out of a total of over 700.

Now on the mx it barely takes 2 seconds. Navigation of menus and folders is noticeably a more crisp affair. Best of all, the new processor consumes no more battery power than the old one. I typically get 4-6 weeks use from a pair of AA alkaline batteries.

You can use NiCad rechargeables, or even better, more modern Nickel Metal Hydride (NiMH) types and the latter will last almost as long as ordinary alkalines, but they die almost without warning at the end of their charge, whereas alkalines fade out more gracefully. Internet e-mail, a Web browser and PC file synchronisation software used to be an expensive optional extra.

It's now bundled for free and the e-mail portion is even on ROM with its own iconbar button. The e-mail client was, from the word go, a pretty agreeable affair. It can now open Microsoft *Word* attachments natively.



Web browsing is still a rather sluggish and unfulfilling experience. Frames are still not supported, so it's an emergency-use only option really. Multiple accounts are supported; useful with the plethora of 'free' Internet offers currently available. Java, which works in conjunction with the Web browser, is supplied on CD-ROM, which could be important for some business users. Psion has made a big commitment to Java and expects thousands of Java applications to attract all sorts of users eventually. If there is one major distinguishing feature of the mx, its metallic grey paint job is it.

The old Series 5 was dressed in a dark grey or occasionally a special edition British Racing Green rubberised finish. Unfortunately, the exposed sharper edges of the case soon lost their paint, leaving otherwise reasonably new Series 5s looking prematurely tired.

The new finish looks hard wearing but only time will tell. So what else has changed? Support for Microsoft *Office* file compatibility has been stepped up and there is even an *Outlook Contacts* database application in addition to the original 'Data' database. Information exchange using platform-independent standards like vCard and IrObex are now supported.

To summarise, the Series 5mx is smarter, more capacious, faster and more versatile than ever before. It has evolved, but not radically. As a Series 5 original edition user I look longingly at the mx but my financial conscience orders me not to part with the £429 inc. VAT asking price.

However, if you're in the market for a powerful pocket computer with a great keyboard and digital voice recorder – go for it! **END**

### Product details

| | |
|---|---|
| Product: | Psion 5mx |
| Price: | £429 inc. VAT |
| Supplier: | Most High Street electrical retailers |

# Network computing

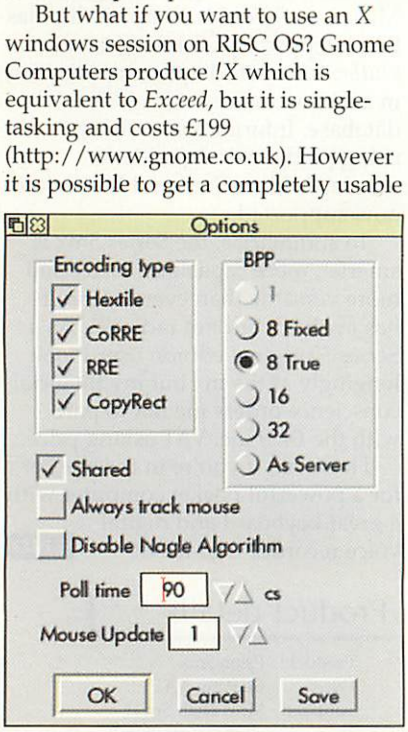
*Ben Ollivere uses his machine at a distance*

Linux is a bit of a buzz word in the computer industry these days. It's a free operating system that is a derivative of Unix and was initially written by Linus Torvelds, who still heads one of the development teams. The most common derivative (RedHat Linux – http://www.redhat.com) is available for RISC OS, in the form of ARMLinux (http://www.arm. uk.linux.org) though installing it is tricky and involves reformatting your harddisc.

An alternative is to use a Unix/Linux machine over a network from your own computer. This is most commonly done by installing an X server – a piece of software allowing you to run programs on a remote computer while the output is displayed on your machine.

The most common software for this is Humming Bird's *Exceed* (which I have run successfully on my PC card using NetLinks). Another common method is to connect using a telnet client, which gives you a text-only command prompt.

But what if you want to use an X windows session on RISC OS? Gnome Computers produce *!X* which is equivalent to *Exceed*, but it is single-tasking and costs £199 (http://www.gnome.co.uk). However it is possible to get a completely usable X session using free alternatives.




*VNCViewer set-up options*

*!Xserver* is a freeware X server under development by Vincent Sanders, and is equivalent to *!X*. You can get it from http://www.inkvine. fluff.org/~vince

Athough only at the 'alpha' stage of development, it does work, but won't really run anything useful at the moment.

## VNC

Virtual Network Computing is a system similar to X, but allows you to run it on a variety of operating systems – clients and servers exist for almost every OS (including Windows, MacOS, Linux/Unix, RISC OS and BeOS).

In order to get a running X session under RISC OS you need to download the Linux client software from http://www.uk.research. att.com/vnc/ follow the download link and select the OS installed on the remote machine you wish to connect to. Download the archive and save it to your directory.

The following instructions assume you are using a Bourne-type shell and a Linux box. You should telnet to the remote machine and enter the following at the command prompt:

```
[ollivere@xserver ollivere]$ unzip vnc-
3/3/2r3_x86_linux_2/0/zip
```

This will extract the program to a sub-directory called *vnc_x86_linux_2/0*

```
[ollivere@xserver ollivere]$ cd
vnc_x86_linux_2.0
```

Changes directory,

```
[ollivere@xserver vnc_x86_linux_2•0]$
chmod u+rwx *
```

Sets the file permissions,

```
[ollivere@xserver vnc_x86_linux_2•0]$
./vncpasswd .auth
```

Constructs a password file

```
Password: [enter desired password]
Verify: [re-enter desired password]
```

The next task is to start the VNC server and get a window manager running. Unix has a system of display screens, this is where several display systems can function at once. It is very likely that your server machine will be running X windows on screen 1. So you will start VNC on screen 2.

It is usual to specify a screen like a port number, so xserver.sjc.ox.ac.uk:1 would be screen 1 on the machine I use, and xserver.sjc.ox.ac.uk:2 would be screen 2. We also need to set the display to output to VNC, and start a window manager:

```
[ollivere@xserver ollivere]$ ./Xvnc :2 -
geometry 1024x768 -depth 16 -rfbauth
./.auth &
```

Start VNC,

```
[ollivere@xserver ollivere]$ export
DISPLAY=xserver.sjc.ox.ac.uk:2
```

Set display to VNC or, if you are using tcsh or other c type shell:

```
[xserver]% setenv DISPLAY
xserver.sjc.ox.ac.uk:2
[ollivere@xserver ollivere]$ wmaker &
```

And start *window maker* window manager.

The initial command ./Xvnc sets the VNC server running, you can get a full list of options with:

```
./Xvnc -help
```

You must add the '-rfbauth ./.auth', or anybody will be able to log on to your account without entering a password, which represents a major security risk.

Your system may not have *window maker* installed (my window manager

## Changing shell

If you are not using a Bourne-type shell (*bash* or derivatives), you can change shell by typing *ssh* at the prompt, and selecting *bash* from the available options.

Obviously the system is limited in performance by the network you use, however you can alleviate network load by choosing a window manager that requires less redraw, I find *afterstep* or *window maker* to be the quickest, and *fvwm2* to be particularly slow.

of preference), if you get an error, something like:

```
[ollivere@xserver vnc_x86_linux_2.0]$
bash: wmaker: command not found
[1]+ Exit 127 wmaker
```

Then try a different window manager, either *twm* or *fvwm*.

## Client software

Now you have a working VNC server, you need to get hold of a RISC OS client to connect to it. There are two currently available: *VNC* by Simon Truss (http://www.bigblue.demon.co.uk/VNC.html) and *VNCviewer* by Leo White (http://www.brighteyes.u-net.com/).

Connect to your server on screen 2, and enter your password when prompted. Hopefully you should now be presented with an X windows screen. Now you have your VNC server running successfully, it can be tweaked a little to make it run a more efficiently.

If you are running a fast network (such as an ethernet) and the remote machine is on the same hub, or across a couple of hubs, you will be able to increase the performance of the VNC desktop by increasing the network traffic, this will increase the performance of your desktop, but slow down the network for other users. There are three changes that can be made:

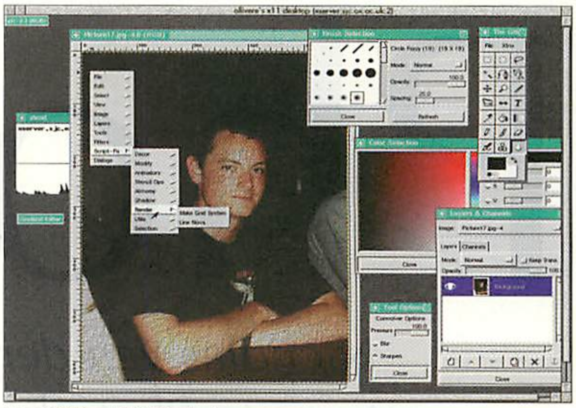
**Screen Update/Poll Time**
These settings set how often your local screen is updated. The lower this value the more responsive the X desktop will become.

**Mouse Update**
This sets how long the program waits before sending updates to the mouse position on the screen. The lower this value the more responsive the mouse will feel.

**WimpPoll** (*VNC* only)
This option sets in (centiseconds) how long a time slice *VNC* may use before other tasks are swapped in. Setting this as high as possible (100 cs), will devote more time to VNC than to other tasks.

**Disable Nagle Algorithm**
(*VNCserver* only) This disables grouping of packets (information sent over the network). Selecting this results in less efficient, but faster, networking.

There are various other methods for increasing the performance of VNC. If you don't need 16bpp colour reducing the number of colours will reduce network traffic. Rather than doing this on the viewer, if you start the VNC server with '8' rather than '16' to specify the colour depth you will not only get better dithering, but a much faster display. You can also make life easier by not selecting textured window tools and backdrops, as plain colours compress better and will therefore be quicker to update.


*The GIMP and TWM window manager*

*VNCviewer* is the most fully implemented of the two RISC OS clients, sporting features such as full screen and single-tasking modes, as well as having an easy to use and understand configuration window.

Connecting is simply a case of clicking Select on the iconbar icon. You do need to specify the screen number though, which is 2. *VNCviewer* also has the edge in terms of ease of configuration with an easy to understand, nicely laid out configure window.

*VNC* is more fiddly than *VNCviewer*, and you must set up many of your choices through editing the config file, it also lacks a full screen mode. However, *VNC* sports a toolbar, is quicker, and so is my client software of choice.

## VNC vs X

So far VNC has been presented a little as a 'poor man's X server', however there are quite a few advantages to using VNC rather than an X server.

The first and largest advantage is that you get a persistent desktop. Logging off and closing your window does not kill your tasks, or change anything on your desktop, as VNC is still running, while under an Xserver the window manager and tasks would usually be killed, and if they weren't there would be no way to re-connect to your new display. Hence it is possible if you (like me) move to many different locations on the same network, or locations with fast Internet access, you can simply open your VNC display to find the desktop as you left it.

VNC also allows multiple connections to the same session, this means that two people may connect to the same desktop at different locations (and on a fast enough network connection even in different countries). This is very useful for demonstrating software or multiple use.

VNC (unlike an X server) may run on any desktop system. Hence it is possible to use a PC, Mac (or even Amiga) with a VNC client simply by running server software on that machine. There is now even a Java version which will run embedded in a Web page, hence machines such as a Psion may still run VNC.

Equally, (and possibly more usefully), it is possible to run a VNCserver on the Acorn. This allows you to use your RISC OS machine across the network. *VNCserver* (http://www.interconnex.co.uk/~paul) is the only server software available, and is fairly rudimentary, but it does work.

### How does it work?

VNC is not an emulator, when you run a program under VNC you are running it on a remote machine over a network. This means that applications run at full speed, what doesn't run at full speed is the screen update.

In a VNC system you have client software and a server software which communicate with each other over the network. The client software detects the mouse-clicks and keys you press on your machine and transmits them over the network to the server software which 'inputs' them for you on the server machine, and then transmits the information back over the network so the client can update it's display. Various tricks are used to ensure that the client runs as quickly as possible.

## Useful software

So what is actually worth using on VNC? Pretty much anything will run (aside from games, you won't be playing *Quake* for example) at an astounding speed considering what is going on. Software I find particularly good includes:

The *GIMP* (GNU Image Manipulation Package) is a complete fully featured art/image manipulation package, and best of all it's free. (http://www.gimp.org)

*Wordperfect 8*, the definitive word processor for Linux (http://www.corel.com) and *Netscape*. (http://www.netscape.com) END

# Photo FX

*Nicholas van der Walle of Astute Graphics returns to Photodesk with some optional extras*

Don't blame me. I freely admit to the fact that Spacetech's two 'FX' plug-in packs for *Photodesk* are nothing new. I had my hands on them a year ago and even then they had been available for some time.

The delay in getting them reviewed lies squarely on the shoulders of *Acorn User*'s Deputy Editor – the contact address being at the front of the magazine if you wish to complain [and to think I got him this job – Ed]. Well, that may not be perfectly true but it does make for a more watertight excuse.

I reviewed *Photodesk 3* what seems like a year ago now (my filing system does not allow for spontaneous checks of any nature) proudly displaying my then latest self-proclaimed masterpiece, *Convergence*, created with the aforementioned program.

While a lot of hard graft went into that one drawing (on the assumption that if I put that comment in, more people will fooled into thinking I work for a living), I must confess to having created many effects within *Convergence* using the special FX add-ons. Back then I found them indispensable. A year later you would not be able to take them away from me for love nor money.

## The FX packs

Officially, I should refer to the *Photodesk* add-ons as *Photodesk Plug-in Effects Collection FX1* (and 2). But as I haven't got all week to write this review, from here on the products shall just be referred to as *FX1* and *FX2*.

It's all very well to give them a more efficient title, but what are they? Well, *Photodesk 2* and *Photodesk Light* acquired an ability that the original product never had – that of being able to add to the package's functionality by supplying a small application that would work within the framework of *Photodesk*. Modularity is another name for this practice.

Like all the other applications that have this ability to be expanded (*ArtWorks*, *Photoshop*, and so on), *Photodesk's* plug-ins are invisible to the Filer after installation, unless you dive into the contents of the program (for which there is no reason to do so). The matter of installation is simplicity itself being a case of just running a foolproof install program.

As the FX packs are not full programs in their own right, they are very compact and are supplied on single floppy discs. In fact, the majority of the disc space (95+% if you want to be pedantic about it) is taken up with the supply of the public domain Web browser *Webster* and the FX's accompanying Web help file. Yes – your only source of documentation is a disc-based HTML document, but this is never a problem as the plug-ins are so easy to use.

## FX pack one

Each pack comes with a distinct list of additional effects that may be achieved over and above what is supplied as standard with *Photodesk*, which may be seen as precious few

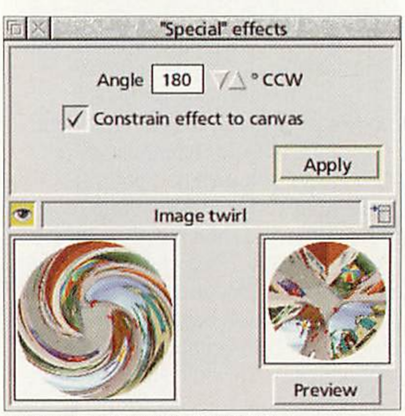
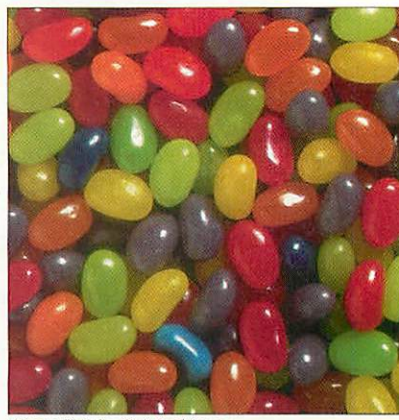


*Figure I: The "Special" effects window showing its preview option*


*Figure II: The Original image*

in the classic 'FX' sense. *FX1* brings the following list to the party:

- Lens simulation
- Spin and zoom blur
- 3D ripple
- Diffuse map
- Outline glow
- Sharpen edges
- Hatch
- Pixelise
- Crackle

All new facilities listed above, just as with the second FX pack, may be accessed through the FX icon on the *Photodesk* toolbar. It is a great relief that all effects may be found through a similar user interface with the minimum of fuss, which makes any sort of documentation unnecessary.

The truth is that probably the best way to explore the potential of these additions is to load one of the hundred example JPEGs supplied with RISC OS 3.5, especially one with a great range of colours like the fruit bowl, and start manipulating all before you with these new toys.

## Common interface

Each effect is controlled through a similar compact 'Special effects' window as shown in Figure I. The top half of the window (along with the ability to select the type of effect available) is always shown, with the



*Figure IV: The image after a positive lens simulation of 500% distortion and 250% magnification has been applied*

eye icon giving the choice to view a preview of the effect you intend to apply. The variables controlling the particular effect differ from type to type.

If you opt to see the preview portion of the window (as depicted in Figure I), the left window may contain either a sample snapshot of a particular area or a global view of the whole image. Whether a snapshot or global view is depicted depends on the suitability for the chosen effect. To the right, a complete scaled view of the whole image is always visible.

If a snapshot preview is deemed to be suitable by *Photodesk*, it is usually because the option applies localised effects (such as rain drops) as opposed to a global effect (such as twisting as shown in Figure I). Navigation around the whole image to select an area to snapshot preview is available in three handy ways; clicking on the area of the global preview (lower right of the window), manually scrolling the snapshot image (for more precise movement) and clicking on the exact spot of the main canvas image. The Preview button applies the effect to the snapshot or global preview image. This does not alter the main canvas, which is thankful, as some of the effects are quite processor-intensive.

Once you are happy with the effect you wish to apply, the appropriately named Apply button forces the effect upon the whole image on the canvas, apart from the masked areas. Simple.



*Figure VI: The 3D ripple effect at 35% amplitude and a frequency of 5 cycles*

## Using FX1

The effects provided on *FX1* are all pretty self-explanatory in the function they are likely to provide. The benefit of this is that they all have a very clear use, so these extras are more than just toys. To demonstrate this, I shall use the *Lens Simulation* to create a, erm... lens effect.

The classic scenario is drawing a timeless magnifying glass above an exciting image, letting the new *Photodesk* effect warp the section of the image that may be viewed through the glass lens area.

Figure II shows the square original image taken from the example images supplied with my Risc PC. When I then apply a positive lens simulation of 500% distortion and 250% magnification to the image, Figure IV is created.

The fact that the whole image becomes affected can, on the surface, seem a bit limiting. However, all effects respect any mask present, with *Hatch* even being able to interact with a mask. In practice, though, the best results are often achieved by cutting and pasting the area you wish to be affected and then using masks to help control just how the affected area can return to the original canvas. This method should be familiar to most people who use *Photodesk*, with its fluid cut and paste abilities aiding the process.



*Figure V: Creating the ubiquitous 'magnifying lens' effect*

Returning to the lens simulation effect, we can see just how versatile each new tool is. In order to change Figure II into Figure V, I conducted a positive lens effect. By altering this to its default negative one, the more conventional lens 'bulge' may be generated.

Figure V was created by cutting and pasting a circular area of the canvas to a new file, applying the negative lens effect to that, then pasting it back to the original canvas (with Replace selected). This left the area of the image outside the supposed glass lens unaffected. To finish the image, I drew a metallic lens ring to highlight the extremes of the effect, lightened the original background to increase contrast and applied some simple shading.

## Being picky

Picking out my other favourites in the *FX1* collection brings me on to *3D ripple*. Imagine placing an image under the water of a puddle – look directly down from above and then drop something in the water. The *3D ripple* tool creates what the puddle scene describes, except you don't get wet or have to retrieve a soggy picture.

To illustrate this, Figure VI is of the *Convergence* print manipulated through the *3D ripple Photodesk* effect at an amplitude setting of 35% and a frequency of 5 cycles. Varying just these two settings can create wildly differing results. I have also found that by adding a border to the image (using the extend feature built into at least *Photodesk* 2), the end result may be controlled as the amplitude setting takes the canvas as a whole into consideration.

Another favourite from the *FX1* selection is that of zoom blurring. For this one, discard the imaginary puddle and just navigate your head very quickly towards a picture. Noticed how the image seemed to



*Figure VII: A zoom blur of 100% strength and 75% speed with a radial mask applied*

zoom towards you? No? Well, just apply this zoom effect to see what I mean. Figure VII was again originally taken from the stock images. Before I applied the zoom effect, I first specified a little outline glow (another *FX1* feature) so that the tips of the petals would be highlighted, then set a radial mask followed by a mask inversion so that the centre of the rose head was protected.

The applied zoom blur of 100% strength and 75% speed affected the extremes of the rose and background, leaving the centre largely in focus. I found that applying a global zoom without the use of a centre focal mask would lose all detail leaving a confusing blurred image.

All other effects from *FX1* that haven't been touched upon so far are illustrated in Figure VIII. Of these, I can only find two limiting factors; the *Spin blur* can not be spun any further than shown and the *Hatch* tool can only hatch from NW to SE (although of course you could flip the image before applying it).

The *Crackle* effect is a nice one in that it can give an 'old master' effect to any image, while the *Diffuse map* option can mimic certain painting styles as well as rough sketches (especially for mono images).

The final effect for this first pack – *Pixelise* – is the ideal one for hiding any informant's identity. The person you want to disguise the identity of may even specify whether their face be pixelised to a mask threshold (giving a jagged pixel border) or not (giving a much smoother pixelated profile).

## FX2

The second effects pack is identical in style to the first, but delivers a whole new batch of options and buttons to mess around with. The list of additional features are as follows:

- Chrome
- Posterise
- Colour contour
- Twirl
- Glaze
- Raindrops
- Dimple
- Channel map
- Median filter
- Crystallise

Again, I will choose three of what I consider to be the more sophisticated effects and put them through their paces.

To start this off, I will tackle what is probably the most versatile of the twenty tools found in both packs, yet looks docile if the user interface's options are anything to judge it by. I must confess to initially ignoring the *Channel map* tool as when I just aimlessly prodded around with it, the results were disappointing.

The trick was to use the mask channel to cause a distortion effect. The profile of the mask determined just how the image on the canvas would be stretched and manipulated – with full control over just how much this tool should pull the image around.

I found one great result that appears to be very convincing. By filling the mask channel with a coarse texture prior to entering the FX tool, I would then select channel 4 (the mask, by default) as the controlling channel for this effects tool.

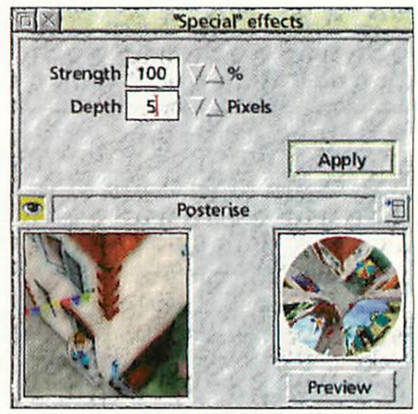



*Figure IX: Using the Channel map tool to create a stone texture*

Requesting a low distortion value (of say, 3) and a radius of around 6, with 50% highlight, I was able to create Figure IX; what I would consider to be the ultimate stone design effect. The difference between this and just superimposing a texture is that this actually distorts the original image rather than just adding or subtracting brightness levels.

## All in a spin

Practicality can take a pause while the more gimmicky, but truly wonderful *Twirl* effect can make an appearance centre stage. I had been awaiting the re-emergence of this facility ever since Oregan's quietly laid-down *Photo Touch* package was released.

Again using my *Convergence* image, in an apparently never-ending shameless plug, I subjected it to a 120° twirl effect. The result may be seen below. The twirl constraint is between -720° to 720° (two twists clockwise to two counter-clockwise, respectively). At these extremes, a very savage whirlpool may be generated. But, back to a more useful

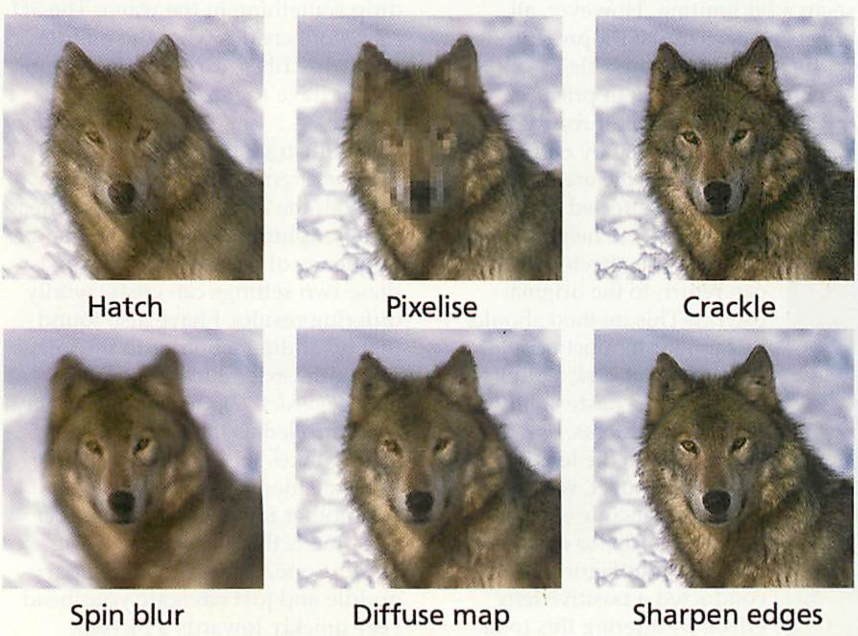



*Figure VIII: The remaining FXI effects*

tool, the last effect I shall look at in relative depth is the ultra-realistic *Raindrops* effect. This was the tool I utilised almost everywhere throughout the development of *Convergence*. Not only does it make for some great raindrop effects but I also found that it was the best way to create a rough, random texture over a large area.

The problem with normal textures (on any system of this type) is that they are based upon a sample square greyscale image, usually not more than 200 pixels square. Whereas some of these are very convincing when applied in relatively small areas, over a greater distance the eye can quickly pick out the repetition. Therefore when I had to generate a gravel effect over a large (pixel-wise) area, I opted to use the *Raindrop* effect tool, setting the drops to a minimum size and almost 100% coverage.

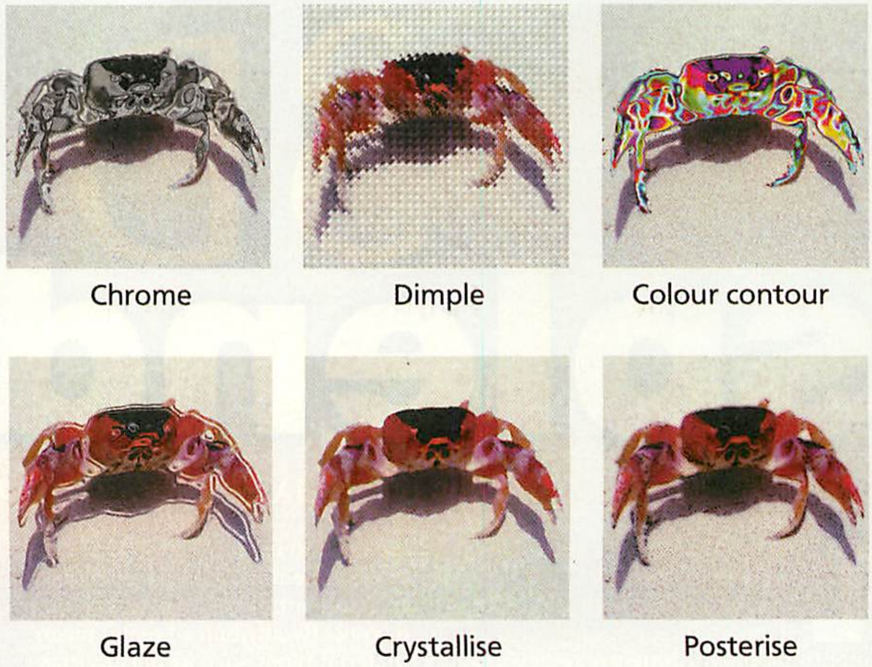



*Figure XI: The remaining FX2 effects*

## The rest

The six remaining tools in the *FX2* pack are not necessarily less significant, but either do as their title describes on the tin or I've never found a real use for them (yet...). Referring to Figure XI, I kick off in this final round with *Chrome* – great for creating sci-fi look creatures. *Dimple* is one of those tools that you will find a real use for once in a lifetime. *Colour contour* is, well, bright. Again, more of an occasional tool for photo-retouching. *Glaze* is quite unique in that it is one of those effects that would be very hard to create in any other way. Just load in that bowl of fruit image as supplied with your computer, click Glaze and watch the liquid icing just pour on.



*Crystallise* is very much a 'style' effect and a very convincing one too. The resultant paint effect is realistic and not over-done as many equivalent packages tend to produce. *Posterise* is in the same class as *Crystallise*, producing a very believable effect.

The final effect is that of *Median filter* which sounds less interesting but serves an oft-requested purpose. It is extremely good at removing sharp colour noise as is often generated when capturing video pictures. Apparently this tool was requested by many of Spacetech's customers who cut their teeth using their original satellite data display packages, where this feature was first present. Never needed it personally, but upon testing it on an artificially-generated noisy picture, I had to admit it removed it cleverly, leaving very few problem areas.



*Figure X: The Raindrops effect*

## To top it all

It's been a bit of a strange review; on their own, each effect amounts to very little, but when you gain access to all twenty new tools your list of possibilities does open dramatically. I did not use the tools immediately (and at the start I wondered if they were worth it), but once you get on with pushing *Photodesk* more and more, you'll find that you start to subconsciously use the tools as if they were always there. If they were removed from my setup now, I'm sure that I would be lost in the first fifteen minutes of booting *Photodesk* up.

The best compliment is that they *are* so transparent in use. There is no need to flick through manuals, attack alien interfaces or get to know the mathematical formulaes involved. Just select and click. Then try it again with another one. Then another, just to see. And another... END

### Product details

| | |
|---|---|
| Product: | Photodesk FX 1 and 2 (require Photodesk 2 or 3 or Photodesk Light to run, also available from Spacetech) |
| Price: | £19.95 each |
| Supplier: | Spacetech Limited |
| Address: | 1 The Courtyard, Southwell Business Park, Portland, Dorset, DT5 2NQ |
| Tel: | 01305 822753 |
| Fax: | 01305 860483 |
| E-mail: | sales@spacetech.co.uk |
| Web: | www.spacetech.co.uk |

# 3D splendour

*Part 2 of Max Palmer's TopModel2 review*

Last month I looked at the basic features of *TopModel2*, Sincronia's excellent RISC OS 3D modelling package. This month I'll be finishing my review by looking at some of its more advanced features.

## The environment

While the creation of 3D objects can yield satisfying results, it is clear that a simple wire mesh lacks the realism we have come to expect from today's crop of graphics packages. To add the next level of depth we need to turn to *TopModel*'s environment tools which enable us to assign attributes to objects within a scene. By attributes I really mean material types such as plastic, glass and metal, colours and texture maps.

In brief, a material type governs the physical properties of an object, such as how light reflects off the surface, whether or not it is transparent, its ambient colour and so on, whereas texture maps permit a picture to be warped over the surface to provide a high degree of realism. For instance, a rectangular block can be made to look like a brick wall by applying a repeating image of a brick pattern to its surface. (Figure I)

*TopModel* allows users to assign attributes to objects by first selecting the desired polygons or primitives and then using the attributes window to set their properties (Figures II and III). Attributes may be chosen from a number of predefined materials and named colours, or a new type can be created by defining the necessary parameters and assigning a name.

New materials can also be exported for use in other scenes using the new resources editor, which also allows user-defined views and paths to be saved.

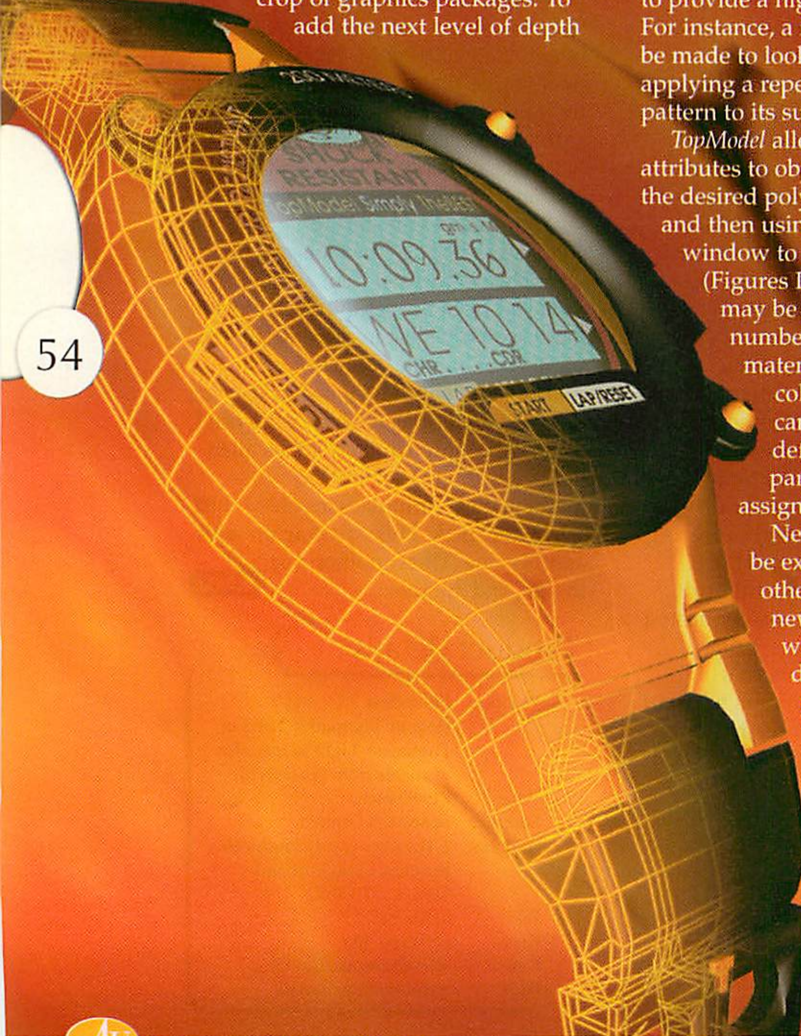
*TopModel* is able to use any graphics format that is supported by *ChangeFSI* as a texture map and maintains a numbered list of all the textures that have been loaded during the creation of a scene. Since the textures themselves are not saved as part of a *TopModel* scene file, *TopModel* copies any textures used during a session inside *TopRes*, its central resources folder. This also reduces the risk of problems associated with images disappearing or moving between sessions.

Once loaded, textures are assigned within the attributes window using one of several mapping modes, polygonal, planar, spherical or cylindrical, the choice of which largely depends on the geometry of the object to which the map will be applied. It is also possible to flip the orientation of the image, specify the number of times a texture is to repeat across the surface (in both the horizontal and vertical directions), and select a colour which will be transparent when rendered.

If that weren't enough, you can apply a texture as a chrome map, or select an additional image to use as a bump map. Bump maps are typically greyscale images, with the intensity indicating the elevation of the surface, and are used to simulate the effects of relief when the object is shaded – hence the term bump map.

In general, the texture engine produces good results and is very fast, particularly when you consider the lack of floating point hardware. However, occasionally small glitches appear in the rendered display, as is common with many fast mapping routines. So care must be taken when applying a texture to the model to account for the orientation and viewing angle in order to eliminate texture smearing.

As well as permitting colours and materials to be assigned to an object, the attributes window enables the display style used to render individual objects to be specified as either wireframe or solid; flat or



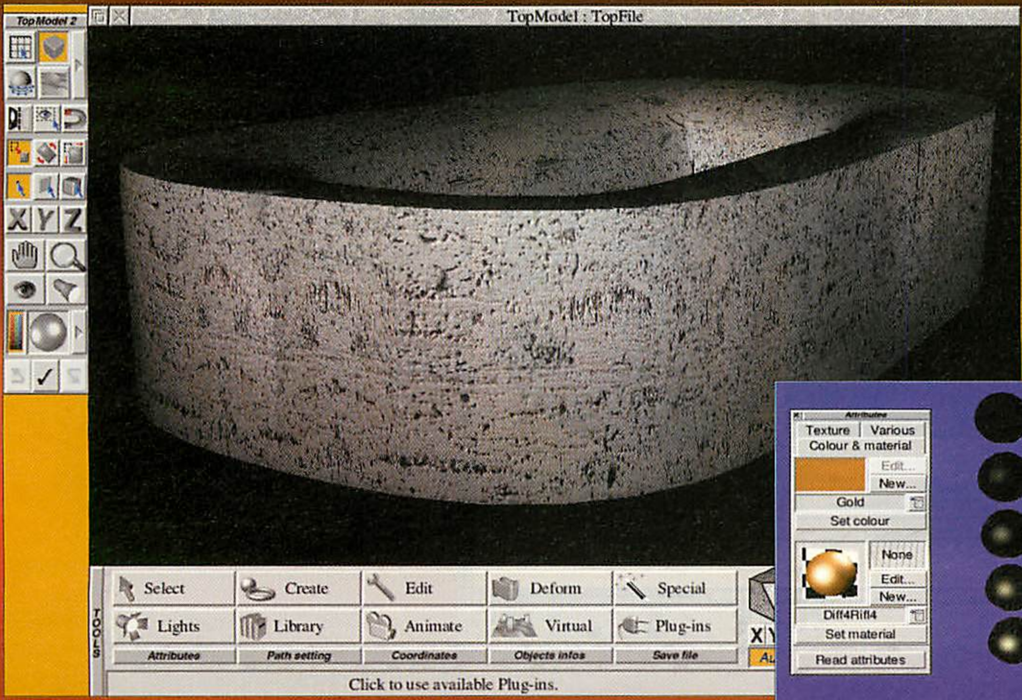



Figure I: An example of texture mapping

*Figure II: The attributes window allows properties to be assigned to objects, including the material type. This example, supplied with TopModel, shows the effect that changes in diffusion and reflection have on the appearance of a material*




smooth and light or opaque. These styles override the currently selected render mode and can be used to improve the appearance of objects or make the machine more responsive by reducing the load on the processor.

For example, Phong shading interpolates between vertices to improve the appearance of objects, making them appear smooth instead of composed of flat surfaces. However, this style of shading can look odd when applied to large, flat areas, such as walls. In this case, a user might choose to override the default rendering style by switching the particular object's attributes from smooth to flat.

## Polish

Once you have created, imported, adjusted and distorted the objects required for your scene, it's time to think about how you can add polish before you output your results. Key areas here include use of lighting, if you're thinking of exporting a bitmap image, and choice of viewing angle.

Unfortunately, while the object creation and manipulation facilities within *TopModel* are pretty good, the lighting facilities are somewhat basic. General lighting options include being able to specify the intensity and colour of the front light and ambient conditions, while the lights menu allows you to add additional

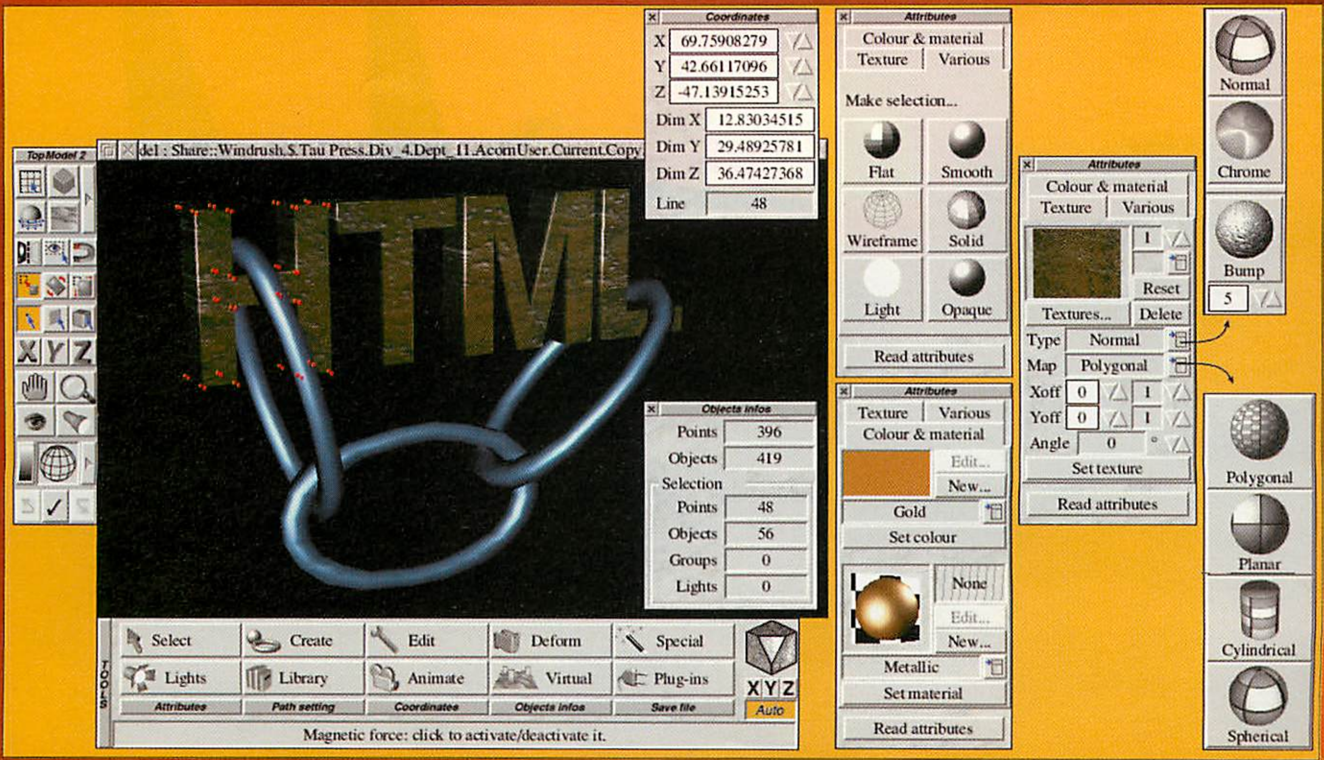



Figure III: The attributes of a selected object

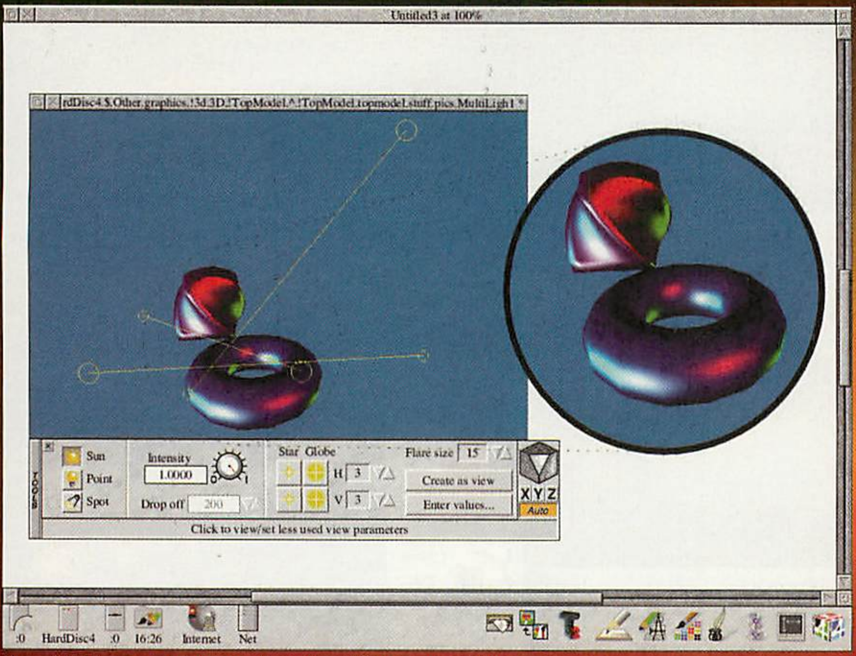



*Figure IV: The path of lights may be made visible for manipulation (main picture) or turned off for the final image (inset)*

spot lights, extra 'sun' type lights (essentially directional, parallel beam sources of light) and point sources.

While you can adjust the intensity of the extra lights, move them about and create primitive lens flares, rather strangely there's no obvious method of setting their colour or adjusting other properties once they have been created; an obvious deficiency. Lights aside, *TopModel* allows the viewpoint to be set up using either the manual rotate/zoom/translate tools or by entering values into a dialog for more precise control. Once a useful angle has been obtained it can be saved as a named view and recalled at a later date.

While most editing and creation of objects is likely to take place with perspective off, more often than not you will want it to be enabled to produce a better looking final scene and this may be done by toggling the perspective icon on the *TopModel* toolbar.

Other nice features which can be used to improve the appearance of the rendered output are the ability to use an image as a backdrop and enable fog, which can be chosen to match the background colour and have the intensity and drop-off rate adjusted to suit. Putting all these effects together enables some pretty good-looking results to be obtained within *TopModel* – as shown in Figure V – however, to get the best from your scene I would recommend using some of the alternative output options available to you.

*TopModel* supports a number of output options in addition to its own native file format, and includes the ability to export the scene as a picture, a drawfile (either wire frame or flat shaded, but not textured), an ASCII file and its own 3DScene filetype, which is compatible with the freeware *TopModel* file viewer (*TMViewer*).

The picture export option creates an image using the current rendering style and allows the size of the output image to be specified, at sizes up to 2048 x 2048, as well as the filetype (either sprite or targa) and colour depth. While *TopModel* does not anti-alias the output image, an option is available to export at double or quadruple the current



*Figure V: A TopModel scene with coloured lights and a background image*

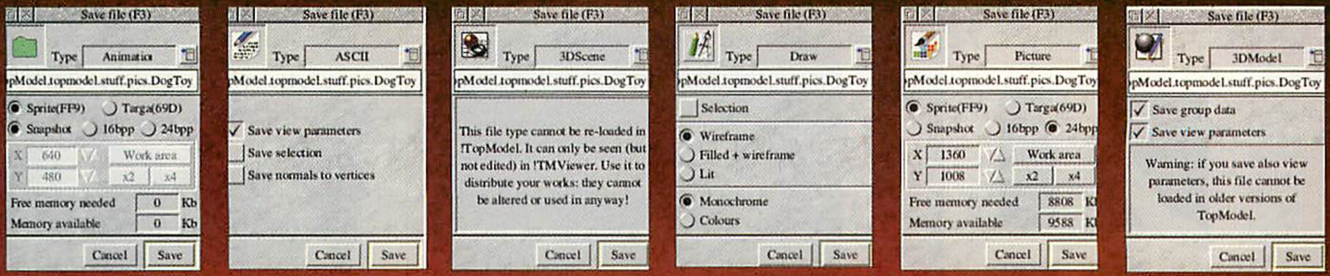



*Figure VI: The standard TopModel output options*

work area dimensions, resolution limitations permitting. You can then produce an anti-aliased version of the picture, at the original work area resolution, by halving the scale of the image using an image processing application such as *ChangeFSI*.

One of the obvious limitations of *TopModel* is that while the final output image is quite good, it is still tied to the capabilities of the rendering engine. As such there is no support for advanced features such as ray-tracing, which enable impressive results with physically accurate reflections and shadows to be produced. In many respects this is not all that surprising, since the level of computation required for accurate ray-tracing demands a machine with a decent floating point unit which, if we're being sensible here, rules Acorns out at present.

However, for those who are fortunate enough to own both an Acorn and recent PC all is not completely lost, since *TopModel* provides a utility to convert *TopModel* ASCII files into other formats, including VRML and DXF. In addition, I have created a fairly basic, 'rough and ready' PC-based utility to convert *TopModel* ASCII files into OBJ files, which I may consider releasing once I've cleared up potential distribution issues.

While, regrettably, none of these export options preserve texture information, they do provide a relatively painless method for importing your creations into many 3D packages on other platforms, enabling you to use *TopModel* as a design tool, which it is good at. Once you have imported your models you will need to add textures, however, assuming your package of choice has a good ray-tracing engine, the results definitely justify the means, as the accompanying box on the creation of the RISC OS logo hopefully demonstrates (Figure VIII).

## Into the future...

One of the great things about *TopModel* is that unlike many other packages that have come along, its creators, Sincronia, have tried hard to listen to users and continually enhance their offering. Although development of the core engine continues, Sincronia have opted to enhance *TopModel*'s feature set by providing a plug-in system, which allows extra modules to be loaded at run-time.

Two such modules are currently commercially available, *TopDeform* and *TopFont*, while others are under development. *TopDeform* provides an extra set of deformation tools that are split into five categories, fractal, enlarge, envelope, displace and function.

These allow various types of distortion to be applied to a mesh, for instance an image can be used to displace points within a mesh (a bit like emboss in a 2D paint package), alternatively objects can be exploded or have fractal noise added to make the surface appear rough or crumpled (among other effects).

Probably of more interest however is *TopFonts*, which comes on CD-





*Figure VII: When saving out as a sprite it pays to save at twice or four times the actual size, then use ChangeFSI to reduce and anti-alias the graphic (above, saved at 100%; right saved at 200% then reduced)*

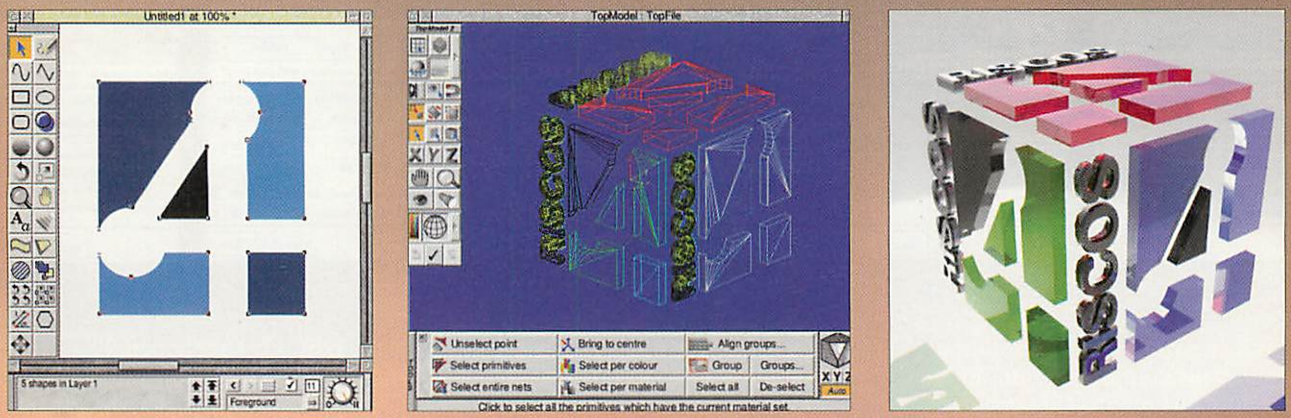



*Figure VIII: Steps outlining the creation of the RISC OS 4 logo*

**Stage 1:** First the basic RISC OS 4 logo was created in *ArtWorks* using four rectangles and three circles. Once made, the five pieces of the logo were created from the original using Martin Wuerthner's excellent Intersect plug-in tool for *Artworks.*

**Stage 2:** Next the logo was exported from *ArtWorks* as a drawfile and loaded into *TopModel* as an extruded object. *TopFont* was then used to create the RISC OS text, with a simple cut-away bevelled edge selected. The text was then rotated and scaled to match the dimensions of the extruded drawfile. Two copies of the face were then made and rotated to lie in the correct positions. Finally, colours were applied to each of the pieces, which were then grouped by colour.

**Stage 3:** The *TopModel* file was exported as an ASCII file and converted into an OBJ file using a PC-based conversion application written by myself (see main text). The OBJ file was imported into MetaCreations' *Bryce4* on a PC and the colours and material settings reapplied to the groups. Finally, a radial light source was placed at the centre of the logo and the scene ray-traced in *Bryce.*

ROM and adds the ability to create 3D text. Once selected you simply choose a font from the list, select a bevel style and type the text you wish to display into an edit box. You then drag the text into the main view and reposition it using the standard selection tools.

While this process works very well, you should be aware that you can only select from the list of fonts that are supplied on the CD-ROM and of those fonts, only numbers and letters (upper and lower case) are permitted, although one font, Fences Plain, does appear to consist of symbols. These slightly annoying restrictions notwithstanding, the variety of effects that can be created using *TopFonts* is impressive, a few examples of which are shown in Figure IX.

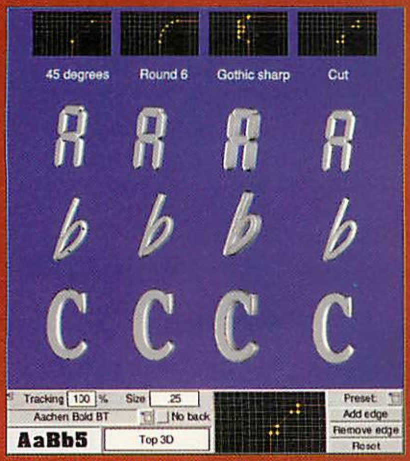



*Figure IX: TopFont in action. The illustration shows the effect that different bevel styles have on the appearance of some of the fonts supplied with the plug-in*

In addition to *TopDeform* and *TopFonts*, two more plug-ins are currently under development. *TopBones* will allow 'skeleton-like' control points to be added to meshes, allowing complex models to be created and sections repositioned much more easily than is currently possible, while *TopMotion* looks set to add a stunning array of features for producing animations, including particle effects and complex linked actions. After sneaking a few glimpses at Wakefield, all I can say is I can't wait.

## Round up

In the preceding sections I have touched upon some of the ways objects can be created, imported, distorted and edited using *TopModel*. However, I must emphasise that there are many other features which I simply haven't had space to introduce, let alone describe.

Indeed, it is illustrative that despite the fact I have been a regular user of *TopModel* since it first came out, some years ago, I still come across powerful features which I never knew exist, and therein lies *TopModel*'s beauty, and also it's curse.

It is so laden with features, which to a certain extent have moulded the development of its own, distinctive, user interface, that it is sometimes difficult to spot the wood from the trees, especially when things don't work quite as we have come to expect them to. This can be frustrating at times, nevertheless, despite its flaws – a few of which I have mentioned in the text – it is an incredibly powerful and rewarding package if you take the time to investigate its features.

It is also worth remembering that the world of three dimensional design is an inherently complex subject. Hopefully, during the course of the next few months, I will be able to ease the learning curve and enable others to get the most from this elegant, occasionally frustrating, graphics package.

With the prospect of further development and new plug-ins on the horizon the future looks bright. Bravo Sincronia! **END**

### Product details

| | |
|---|---|
| Product: | TopModel2 |
| Price: | £152.75 |
| Product: | Top3DFonts (Plug-in) |
| Price: | £58.63 (includes CD collection2 and free v2.14 upgrade) |
| Product: | TopDeform (Plug-in) |
| Price: | £28.79 |
| Supplier: | Spacetech, 1 The Courtyard, Southwell Business Park, Portland, Dorset DT5 2JS |
| Tel: | (+44/0) 1305 822753 |
| Fax: | (+44/0) 1305 860483 |
| E-mail: | sales@spacetech.co.uk |
| Web: | www.spacetech.co.uk/topmodel/ |

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- Olympus C1400L Digital Camera (1280 x 1024) + 2 x 8Mb SmartMedia, Serial Cable, PC Software & Snapshot+ for RISC OS (Irlam Instruments), £450 ono. Works fine with RISC OS 3.6, 3.7 & RISC OS 4.0. Call Paul on 0171 202 3309 or e-mail paul_jagger@uk.ibm.com
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- PC software for windows, TextEase Std Ver 4.0 unregistered CD, manuals £30; Fireworkz for windows £25.00(no manual) DX4/100PC card manuals, DOS7 £75. Tel: 01706 812 516
- A3020, 2Mb RAM, RISC OS 3.11, AKF40 colour monitor, hi-fi sound upgrade, £120 including delivery. Also have 4Mb machine, specs as above, £150 including delivery. Call Glenn on (01453) 844513 or preferably e-mail: glenn@squirrel-net.demon.co.uk
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## Sleuth 3

No matter which scanner you buy, if it was originally intended for use on a PC or Macintosh you will almost certainly be given a 'lite' version of an OCR package. This is almost always effective to a point, but when you demand accuracy it's no good. So what's the solution?





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Sleuth 3 is the latest version of the acclaimed OCR package for RISC OS computer systems. The editor has been enhanced (above that of Sleuth 2) to allow greater control over the OCR'd text including the ability to insert/remove paragraph breaks and amend identical errors easily. Greater accuracy has been achieved, especially with degraded images. New font information – a total of 114 fonts and styles – has been added including more mono-spaced fonts and has the ability to output them in Rich Text Format (RTF), which can then be loaded into any word processor or DTP package that supports RTF (including Ovation Pro and Easiwriter).

While Sleuth 3 can be used on any machine with RISC OS 3.1 and 4Mb of RAM, we recommend use on a Risc PC, A7000+ or similarly specified machine for the best performance.

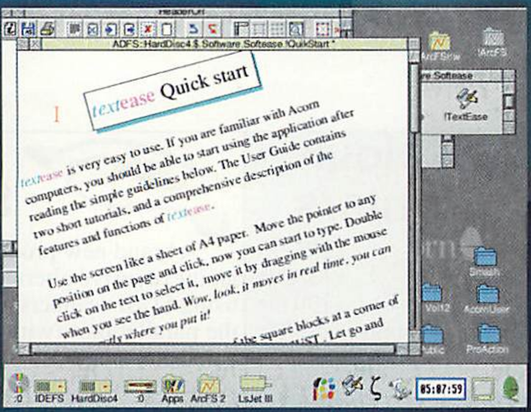
*The key new features of Sleuth 3 are:*

- Full multitasking editor, allowing you to correct mistakes while the OCR routine is running
- Ability to achieve over 90% accuracy on recognised fonts, using good quality 300-400dpi images
- Text conversion at between 80 and 250 words per minute
- User-definable or automatic zone creation can be used to choose which part of the image to convert
- Editable user dictionaries
- Foreign language dictionaries
- Batch processing
- Import of grayscale sprites
- Editor enhancements
- Automatic page orientation
- Improved accuracy

*The usual RRP of Sleuth 3 is £116.33, but we have negotiated with Beebug Ltd to offer Sleuth 3 to you at just £105*

## Textease

This award-winning desktop publishing package is capable of so much – rather than my writing about it, take a look at the screenshot. The version on offer isn't the latest; but it is fully StrongARM compatible and we guarantee your creative output will be made even easier! Usually priced at £49, we're offering it at half that – buy now, while stocks last!




**£25**

## Drifter

For many years, one of the most popular styles of computer game has been a racing game; and racing games on RISC OS have always (it seems) followed one style: car, speeding, and nothing else. Drifter is a racing game unlike any other on the Acorn platform. Taking you into space, the action occurs in a flying buggy unlike anything seen before.




Drifter will work on any RISC OS computer with 2Mb RAM or more, but is best suited to a Risc PC/A7000. The usual price is £35 inclusive: we've done a deal with The Fourth Dimension to get you £10 off!

**£25**

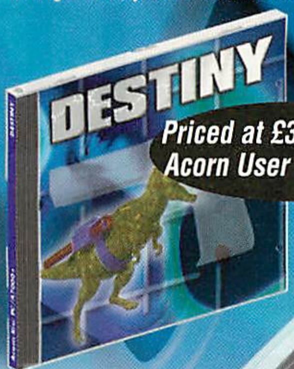
## Destiny



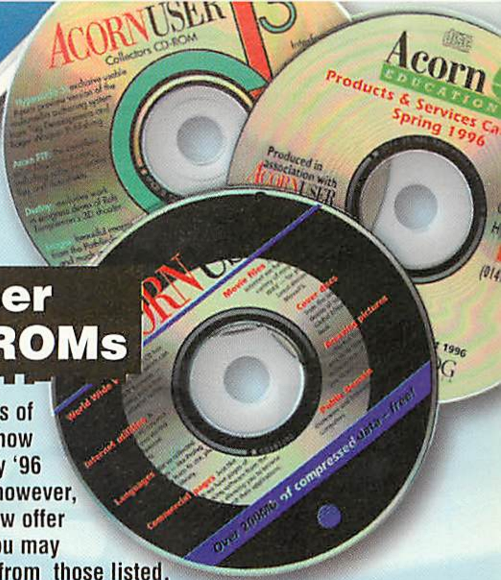
Irrespective of where you work, you will probably have come across a first-person shoot 'em up game in the same vein as *Doom*, *Quake* and so on. Up to now all these games have all been PC imports ...enter *Destiny*, the first original game of this type for the RISC OS platform.

The culmination of four years work, *Destiny* features high resolution 3D graphics, a huge variety of levels, serious fire power, intelligent enemies, original music and much much more.

The game requires either a Risc PC or A7000+ (a StrongARM is highly recommended) with 8Mb RAM and a CD-ROM drive.




***Priced at £30, or £25 to Acorn User subscribers***




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With the immense success of our CD-ROM offer, we're now out of stock of the January '96 Cover CD-ROM. We are, however, pleased to announce a new offer with a slight twist to it: you may choose any THREE items from those listed, for £5. We're offering a little more choice this time; but do note we're not able to supply anything less than three items.

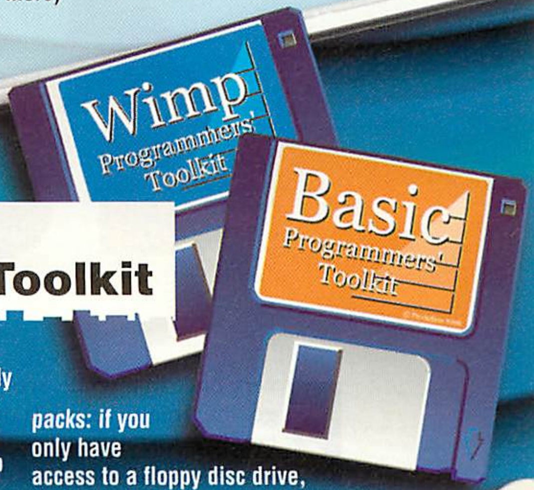
You may choose any three from:

- August '96 CD-ROM (Collectors CD-ROM 2 – lots of Web stuff, utilities, games and much more)
- December '97 CD-ROM (Collectors CD-ROM 3 – Huge Destiny demonstration, past cover discs and much more)
- TWO past cover discs (of our choice – they will be over one year old)
- BOTH film trailer CD-ROMs
- The Evolution CD-ROM

***This three-disc set costs just £5***

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## Basic & Wimp Programmers' Toolkit

We folks at Acorn User know you like to program – that is plain enough for anybody to see. But we also know there are a few of you who perhaps don't have the time to sit down and learn, or would like it to be just that little bit easier.

In this exclusive new reader offer, ProAction are offering Acorn User readers a choice of two special programmers' packs: if you only have access to a floppy disc drive, the Basic & Wimp Programmers' Toolkits (supplied with full documentation) will serve as the ideal set of utilities to cater for your programming needs.

***Either way, it costs just £13.50 or £10 for Acorn User subscribers.***

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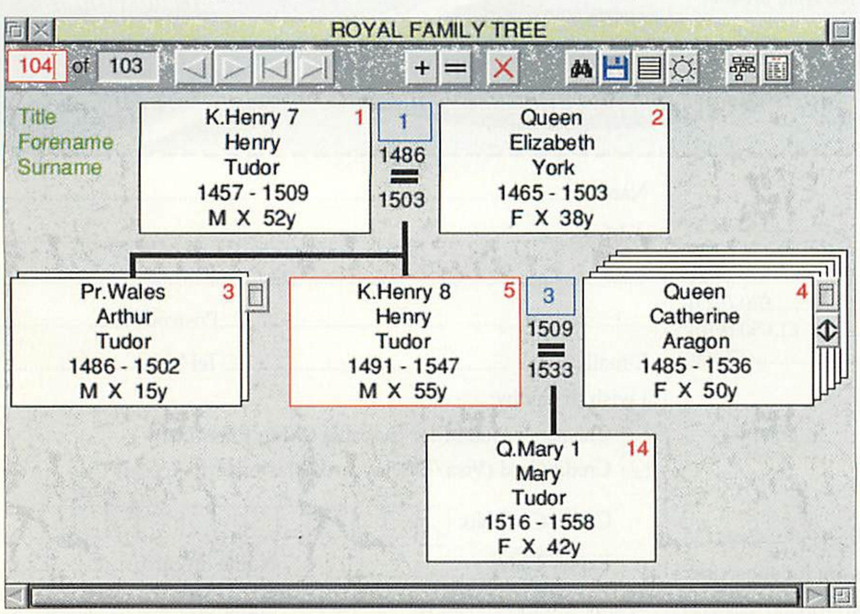
# Keeping it in the family

*Alasdair Bailey finds out where he came from*

Every once in a while, we all get the urge to research our family's past. Whatever the reasons, it can be a long and arduous task but it can be very rewarding to find out interesting details about the lives of those who went before you.

In the past, family trees would be written on pieces of paper but in these days of interwebs and millennium bugs, there's another method of nurturing your family tree: from the comfort of your RISC OS desktop. *Ancestor+*, published by APDL, is the grandchild of *Ancestry*, the late Graham Crow's first stab at family tree software which was first written in the days of Arthur OS and single-tasking applications.

*Ancestry* was published by Minerva, as was *Ancestry II* which was written by a different author. This latest offering was written partly by Graham Crow but was taken on by Dave Holden of APDL after Graham's untimely death. The subtle name change from 'Ancestry' to 'Ancestor' came as a result of Minerva's claim to sole rights on the name when applied to RISC OS software.




*Ancestor+'s main window, nice.*

## Ancestor+

Installing the program is a doddle – just copy it onto a hard disc and you're away. It will even run from the floppy disc on lower-spec machines.

It's very easy to start using *Ancestor+* without referring to the manual. This is a bonus in any software package. Although a few of *Ancestor*'s buttons are a little cryptic to begin with, interactive help is supported in most windows. This could do with some more work though because not all areas of the program are yet covered.

Entering data on members of your family is relatively easy. In operation, *Ancestor+*, is very much like a customised database. The plus icon on the toolbar opens up the 'Add Person' window into which data

about the person is entered in the appropriate fields.

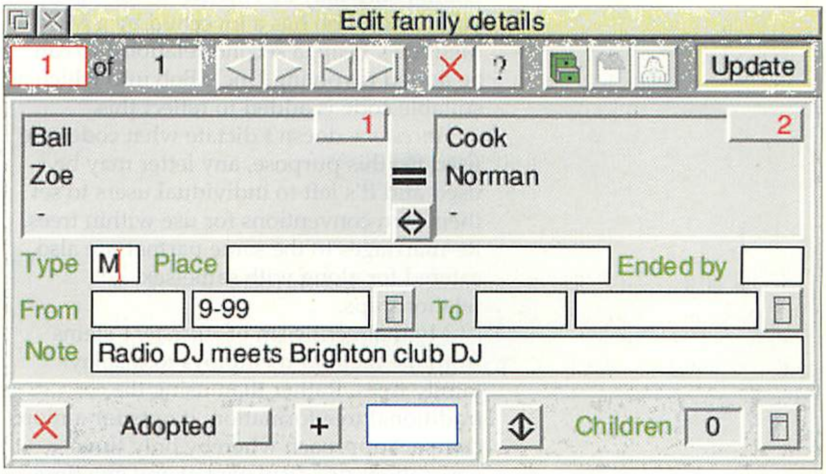
Data is entered in a fairly routine fashion, all the usual fields like name, surname, date of birth and so on, are included along with a few useful extras.

Provision is made for including details of the locations of births and deaths along with a field to allow a record to be made of any bynames which a person may have been known by during their time.

Some useful date prefixes are supported throughout *Ancestor+*. Once a date is entered, an option exists to prefix it with one of five date codes.

These can be used where a date is not precise in order to indicate that an estimate has been used. Dates may be entered in almost any numerical form and the program will calculate ages accordingly, either by using the death date if there is one or the computer's calendar for those still alive.

Relationships between people are entered in a similarly straightforward manner. Families are created by entering details of a marriage between two people then children may be added either by record number or by dragging their icon from the main window into the family window. This drag and drop functionality is a nice feature and is also supported in other areas of the application. Some clever date checking goes




*The latest addition to the Cook and Ball family trees*

on when entering families. The program watches out for errors and alerts the user when one is detected. For example, when entering data it is easy to accidentally select the wrong person as a child of the marriage, in which case the program will point this out by monitoring the mother's age at the birth and also whether the 'child' already has parents defined. This error checking can be quite useful when constructing large trees. Were it not present, your grandmother could end up as your daughter and future generations would forever wonder why you didn't patent that time-machine. *Ancestor*'s

## Finding a Family

So, you have a family tree editing tool, now you need a family tree. The first stage in researching your family tree should be to make a written record of the birthdates, deathdates and other useful data on your immediate family. Once that's done, enter it into the computer and look for where gaps exist.

It's more than likely that it will be relatively easy to take the tree back three or so generations but once you get to your grandparent's parents, things become a little more tricky.

So once you reach this stage, it's best to find the oldest person in your family and retrieve whatever information you can on their parents, grandparents and perhaps even brothers and sisters. If your family tree is going to go on a Website or even just retained for future generations, it's vital that you make it interesting to read. Research and make a record of any details of the lives of those individuals who have gone before you. You never know, your questioning might even reveal some of your family's deepest darkest secrets. While researching for this article, I discovered that a member of my family had been involved in a major tabloid scandal in the 1970s.

I won't give you all the details because some things are best kept within families but it was amusing to be let in on this skeleton in the closet so to speak. It's also a fact that the owner of this journal is descended from sheep-rustlers and Romanies – which explains a lot.

Once you've gleaned all the information you can from living relatives, things get a little gritty. Now, it's time to refer to public records offices and other archives. These are only of use if you know the place and date of birth of a person.

They can be used to confirm dates, marriages and all sorts of other particulars which are stored in the public archives. Talk to your local registry office or library for more information on accessing the archives. Another potentially excellent resource, if your family has one, is the family bible. Many families have kept a record of births, deaths and marriages in the family bible.

As with many other fields, the WWW is a very useful tool when researching family trees. However, it must be used properly else you'll end up with a load of irrelevant and possibly mis-leading information.

A good starting place for UK genealogy research is the Public Records Office WWW site at http://www.pro.gov.uk/. The site contains many useful links and details on how to access such things as military personnel archives and UK public records.

If you (or an ancestor) have a distinctive name you may find a Website detailing that names genealogy as researched by others, for example there is (to mention that man again) a www.turnbull.net which gives quite a lot of information and source material.

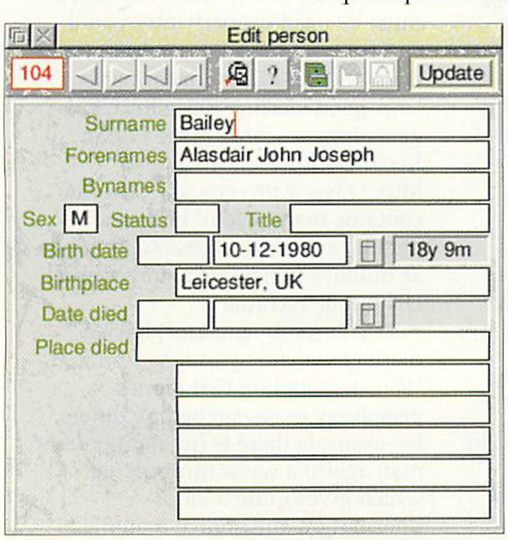
marriage window includes a handy field into which the exact nature of the relationship may be entered. If, for example, your Uncle Bob has a lovechild by a Miss Melinda Cheap, a second relationship can be added involving Uncle Bob into which a suitable code is added to reflect this.

*Ancestor+* doesn't dictate what codes are used for this purpose, any letter may be used and it's left to individual users to set their own conventions for use within trees. Re-marriages to the same partner are also catered for along with same-sex relationships.

My main criticism of *Ancestor+* stems from the method it employs to display family trees. Rather than using the traditional tree formation, it opts for a more compact approach whereby only three generations are displayed at any one time and children are displayed as a stack of record cards which must be viewed individually rather than in a line below their parents all at once. It could be argued that this approach simplifies things but from my experience, programs which display the whole tree in a larger window are far easier to work with.

I'm told that this option is being worked on and in the meantime, it is possible to display the tree as a sort of text file with the branches fully expanded. The tree can be edited from this window but it looks a little ugly and there's no nice tool bar as is seen in the main window. One very useful feature found in *Ancestor+* is the resource directory where text files, pictures and any other digital resources you might happen to have on an individual or family may be stored.

Once constructed, the data within the resources directory structure is easily accessed via buttons on the toolbars of both the family and person editing windows. The manual does a good job of explaining how to create and then link a resources directory to an *Ancestor+* file. The process is trivial but perhaps that's more reason for it to be automated – a conventional 'save as' box could be used to set up the path automatically.




*Make a note of it, I'll be expecting lots of birthday cards now!*

*Ancestor+* is able to export the contents of a tree in various ways. Data can be saved as a text file which displays the whole tree in a sideways orientation including names, dates and all the usual information. This is a nice feature but as I mentioned before, a complete tree in a more presentable style would be nice. The database may also be saved as a CSV file or in HTML form.

The HTML form is quite novel in that each person's details are listed with their data fields followed by hyperlinks to their spouse, parents and children where appropriate. With some editing, such a document could be a nice addition to a personal Web page.

The other major family tree program for RISC OS is the PD application *Family*, this hasn't been updated for a few years now but is a competent application that is used quite extensively. *Ancestor+* will import *Family* files quite happily and can export standard GEDCOM format files which *Family* and applications on other platforms will read.

The ability to import GEDCOM files is being updated continually and as people find ones that won't load APDL make the necessary changes to make it work. For example initially *Ancestor+* would discard any notations attached to particular people in GEDCOM files, now it's possible to put this information into user-defined fields in *Ancestor+*.

One thing *Ancestor+* won't do is print. This is a potentially serious problem since you can't get a hard copy in the traditional 'tree' layout. All is not lost, however, because by exporting your information in GEDCOM you can load it into *Family* and get your tree from there. APDL say that the printing situation is being addressed but users have said that other things are more important first.

Some useful example files are included with *Ancestor+*, one of which is very comprehensive tree charting the British Royal family from the 15th century to the present day.

Overall, *Ancestor+* is a very stable application which does the job it's designed to do. Bear in mind that, as with any good application, development is still ongoing and updates are free of charge. If you're interested in researching your family's roots, it's well worth the £59 price tag. With cheaper upgrades also available from *Ancestry* and *Ancestry II*, there's no excuse for not upgrading today. **END**

## Product details

| | |
|---|---|
| Product: | Ancestor+ |
| Price: | £59 (upgrade from Ancestry: £39, Ancestry II: £49 ... yes, it does cost more to upgrade from Ancestry II) |
| Supplier: | APDL, 39 Knighton Park Road, Sydenham, London. SE26 5RN |
| Tel: | 0181 778 2659 |
| Fax: | 0181 488 0487 |
| E-mail: | info@apdl.co.uk |
| Web: | http://www.apdl.co.uk/ |

# The number works

*Pam Turnbull puts the number cruncher to the test*

Naturally following the areas covered in the Numeracy Hour framework for Years 3 and 4, this is an adventure set in an old factory, and is reminiscent of New Media's earlier CD-ROM fantasy. Here, all the numbers have been stolen from a town, and it is down to you to restore them, and so get the toasters and microwaves working properly again.

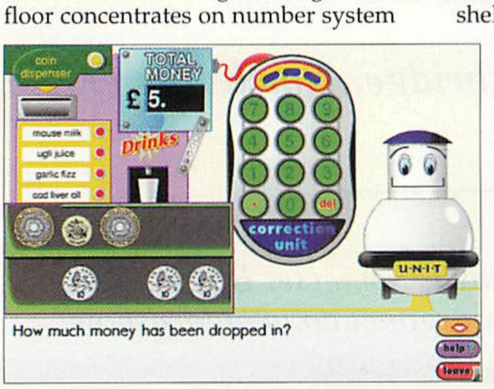
Classes can run the activities in adventure format or, taking the teacher route, concentrate on specific areas covered in earlier sessions. Taking the latter option, children go directly to the machine they want to repair, by simply clicking on it. Each machine mended is noted in the record-keeping section which teachers can access at any time.

Your ally in this venture is a robot called UNIT, who guides you through the old factory where you repair the machines; this involves correcting those machines which have forgotten how to divide in half or multiply by ten. On the first level, you must guide UNIT to the broken machines across a square-patterned floor, using a remote control to input numbers: positive for forward, negative for backward; other inputs turn him to left or right. The ground floor concentrates on number system and place value activities with such machines as the Fraction Contraption and Order Recorder. Moving to the first floor, your quest reveals machines dealing with relationships between numbers and computation, in particular the Adder Upper, where you learn and practise adding two-digit numbers.

Puzzles are all available at three levels, so at Level 1 you're adding two-digit numbers without exchange, while at Level 2 exchange is introduced, and at Level 3 you're adding two-digit numbers with exchange into 100's.

On the first floor, manoeuvring is a matter of entering the correct coordinates for each doorway. If you discover a room containing a broken machine, you must mend it before moving on to the Attic. There are 21 machines in total, but you can wander around the factory even if you don't manage to fix them all. However, you only use the navigation controls within the adventure context.

Access to the Attic is also to be found on the first floor; here, you'll find a host of numerical problems to solve. Navigation here is slightly different too, with UNIT having to move around cardboard boxes shelved to look remarkably like a grid.




Children move around by entering two-figure coordinates to reveal machines such as the Broken Calculator and Estimator Guestimator. Estimation is an essential but difficult concept for many children and here the approach is to teach children how to approximate an answer, then check if it is within the correct range. This is taught using additions with two digits at Level 1, subtraction with two digits at Level 2, and sums such as 23 x 7 at Level 3.

You can tell a lot from a program by how it deals with incorrect responses. Here there are three levels of response. On the first mistake UNIT points out that the children have made a mistake but have the opportunity of trying again. Second time around, the help button is suggested: clicking here reveals extra support by explaining the concepts involved in what they are attempting. If they enter a third incorrect answer (depending on the activity) children will be presented with a new, simpler puzzle.

As well as the software and detailed manual there are a set of 18 Number Works Worksheets as well as a full-colour board game sheet for use away from the computer. These masters are mostly based on the machines: for instance, one of them is a blank representation of the Multiple Machine. You can give one to each child and call out numbers for children to write on to their machine in the correct place according to whether they are a multiple of that number or not.

This is an excellent package, whether you opt to use the adventure or activity route. The introduction is a little long but there is a skip button for the impatient. If children are unsure of coordinates and negative numbers then it is best to avoid the adventure's navigation options as there is not enough advice and information within the program for those unfamiliar with such concepts.

The entire curriculum isn't covered here, especially insofar as we're looking at number rather than shape and space, but the activities are varied, interesting and relevant to everyday experience.

This is particularly true of the very popular Drinks Machine, where children total coins and practise decimal notation. A welcome addition to any Numeracy Hour. **END**

### Product details

| | |
|---|---|
| Product: | The Number Works |
| Ages: | 7-9 year olds |
| Price: | £49.95 |
| Supplier: | Sherston Software, Angel House, Malmesbury, Wiltshire SN16 0LH |
| Tel: | (+44/0) 1666 843224 |
| Fax: | (+44/0) 1666 843216 |
| Web: | www.sherston.com |
| E-mail: | sales@sherston.co.uk |

# The living world

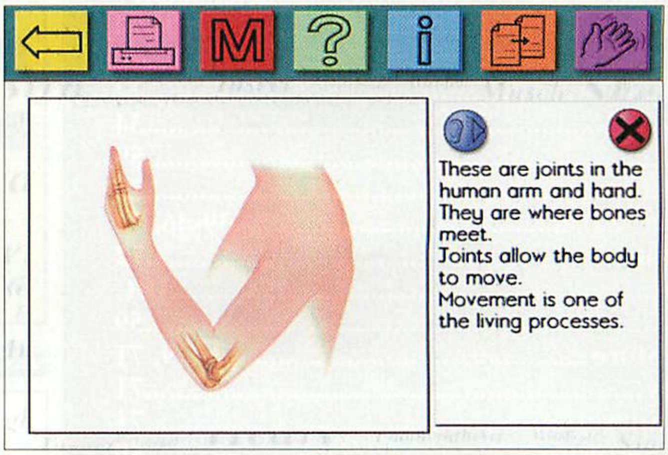
*Pam Turnbull looks at a joint resource for pupils and teachers*

The first in a new series from Sherston, this provides the key vocabulary required by Key Stage 2 pupils. The emphasis here is on *The Living World*.

In essence this is a simple but specific encyclopedia. From the main menu you can choose three routes into the information: the a b c index, word search or picture index. The alphabetical index is very straightforward allowing you to scroll through the alphabetical listing or jump to the first entry for each letter by clicking on the relevant letter of the alphabet – all presented in a large and clear font.

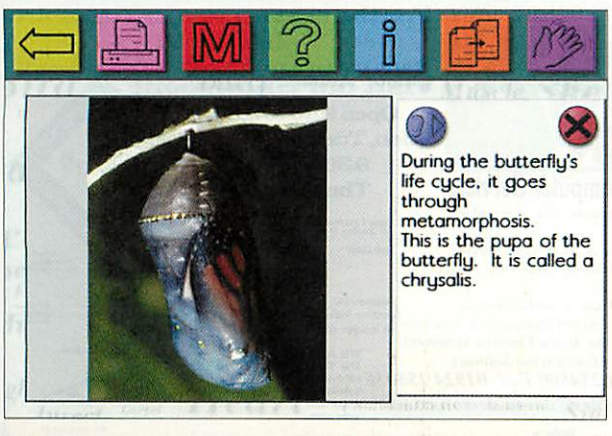
Along the top of the screen are simple icons allowing you to revert to the main menu, ask advice on using the CD-ROM or find explanations on what each icon actually means, all presented in simple and very child-friendly language and layout. Other icons are self-explanatory but everything is detailed here if you need to check.

Having found your entry in the index, you can click on the ear icon to make sure of its pronunciation, and double-click or press OK to open the entry. This will be accompanied by three icons, one to hear the text, another to see the links to other entries and a third to access a diagram or photograph. Having clicked on a link, you can use the back arrows to find your way home. You can also print out the information or export the entry to another application.




The second route to information is to search for a specific word or words. Type in the words and click *and* or *or* and the *find* button. A list of matching entries will then appear. Highlight one and click the blue sound icon to hear it or click the OK button to go to the entry. A very simple search mechanism but all that is required here – just make sure you get your spelling right.

Then there is the Picture Index which looks like and works in a very similar way to the A-Z listing. Choose your word to get a screen of thumbnail pictures. Make your choice to get a full-screen image and caption icon. Click on this to read/hear a description of the picture.




This is a very simple but effective reference which children can access totally on their own within ICT or Science lessons. The major areas covered in the QCA Science document are covered and though not comprehensive the diagrams and explanations are clear and well thought out.

At times the language is a little high for the majority of Year 3s, and it would have been nice if teachers could have had the option of setting the level of language and detail. As an extension, research and discussion tool, however, it definitely earns its place in the classroom. The cross-referencing works too, sending children off in pursuit of concepts such as metamorphosis or photosynthesis. Not only a useful resource, but one designed with classrooms in mind. END

## Product details

| | |
|---|---|
| Product: | Science Keywords – The Living World |
| Ages: | 7-11 years |
| Price: | £29.95 |
| Supplier: | Sherston Software, Angel House, Malmesbury, Wiltshire SN16 0LH |
| Tel: | (+44/0) 1666 843224 |
| Fax: | (+44/0) 1666 843216 |
| Web: | www.sherston.com |
| E-mail: | sales@sherston.co.uk |

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# Try it for free

If you have been tempted by AngliaCampus but didn't want to commit your budget why not take advantage of their offer of a free two-month trial? AngliaCampus is spearheading a campaign to promote use of the Internet by parents, children and teachers as an educational resource for the home as well as the school.

The report responsible for this initiative surveyed nearly 4,000 children from more than 40 schools throughout the UK, resulting in the following: 79% of children claim that the Internet helps them with their school homework; 42% of schools have computers in their libraries; 40% have them in every classroom, but only ten computers, on average, linked to the Internet.

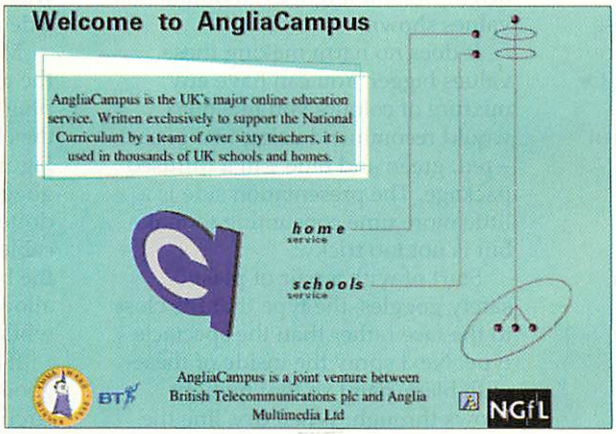
Interestingly a third of children questioned said that if they had to be away from school because of illness, they would like to receive help with their schoolwork via the Internet.
Rob Lawson, from NOP, who researched the findings, comments: "Our findings suggest some significant shifts in patterns of use of the Internet among British children.

If they have access from home they prefer using it from there – they're on for longer, they get control of the mouse and, of course, they don't have the teacher looking over their shoulder. The findings also indicate that usage is going to end up pretty close to one hundred per cent in the next couple of years."

As an incentive for using the Internet at home, AngliaCampus for Homes is now available at http://www.angliacampus.com. The service is content-led, based on the requirements of the National Curriculum for England and Wales, and divides into the Key Stages of learning from primary to secondary school, mirroring the AngliaCampus school service.

The new home service also provides additional information, including: advice and support for parents; details of the curriculum for all age groups; a personal guide to finding information on the Internet; how to be a school governor, and how to join the PTA.

It also has a 'learning exchange' section with links to thousands of approved educational Websites which children can browse for extra resources.




# Letts go

Granada Learning's parent company, the Granada Media Group, has acquired Letts Educational. This is the latest step in the development of its rapidly growing educational and on-line businesses. As a sign of Granada Media's commitment to become a leading player in the fast-growing educational market, G-Wizz, their new Internet entertainment service, has announced that it will feature an on-line educational service when it launches later this year.

Granada is also currently in negotiations with the DfEE to trial a new interactive educational television service called Result with a proposed national roll-out in 2000.

## Diary date

Bett 2000 - The Educational Technology Show
12-15 January 2000
Grand Hall, Olympia, London
Admission: Free
Contact: 01203 426458
Web: www.education-net.co.uk

## In brief

### Rhyme and reason

**Sherston Software (01666 843 200) are about the release Volume B of the Oxford Reading Tree Rhyme and Analogy Activity Software.**

**This second volume will feature 18 interactive phonics activities based on the Rhyme & Analogy strand of the Oxford Reading Tree Scheme. Carefully graded to support children's knowledge of rhyme, letters and sounds while helping them to develop listening, reading and writing skills, the software, priced at £40, has been developed in collaboration with Professor Usha Goswami, editor of the Rhyme and Analogy series.**

**All the activities in this volume are based on the photocopy masters by Dr. Clare Kirtley and include lively animated feedback to reinforce correct answers and gently correct mistakes. The software is fully adjustable through the teacher control menu and includes a record keeping facility to tracks pupils' progress.**

### ICT courses

**Meanwhile, The Advisory Unit: Computers in Education (01707 266 714) are offering in-service Primary School Courses to help teachers undertake a supportive role in policy, planning and the application of ICT to the curriculum, with such courses as *Supporting the Numeracy Hour with ICT* aiming to demonstrate how ICT can be used to introduce mathematical topics into the Numeracy Hour.**

**Secondary School Courses are mainly subject-based; this is for teachers who want to update their knowledge of current ICT practice and requirements in their own field. With an emphasis on practical sessions, these courses aim to perfect skills and to increase the understanding of how ICT applies to a given subject.**

## Contacting AU

Pam Turnbull:
educ@acornuser.com

# The Relaxathron

*Mike Cook turns in and tunes on*

My projects have been at the hi-tech end of things the past few months so I thought I would redress the balance with one suitable for the most basic of beginners to the world of interfacing. I got the idea visiting last summer's music festival at Leeds. Several stalls had what they claimed were 'brain machines' but were in fact no more than this month's project: The Relaxathron.

To give it the advertising spiel: The Relaxathron cuts out the stresses and strains of everyday life by providing sensory protection for disturbing stimuli. Removing stress and allowing the user to experience the ultimate in relaxation therapy. Or to use more technical language, slowly flashing LEDs in blacked out goggles.

The idea is that all you see are lights changing in a slow random fashion. Coupled with earphones playing your favourite ambient or classical CD track or even slowly whooshing white noise heard through padded headphones.

The electronic side of the hardware is simplicity itself and is shown in Figure I. It consists simply of a resistor and an LED on each bit of the printer port. By using low power 3mm LEDs there is enough power from the printer port buffers to light the LED without any further buffering or power supply. Different colours of LED require different values of limiting resistor to give the same brightness, that's because the efficiency is dependent on colour.

Therefore different resistor values are indicated for different LEDs, you might like to change this to suit the types you have, in any case in this application you don't want them too bright, so you might even double the values shown.

It does no harm making these values bigger. You can have any mixture of colours you like but I would recommend using two of each – red, green and blue – in a diffused package. The presentation side is a little more time consuming to make but is not too tricky.

Start of with a pair of plastic safety goggles, the type that fits close to the face rather than the spectacle type. Next spray the inside of these with black paint so that no light shows through. When dry, line the inside of the goggles with aluminium foil, the shiny side out. Don't worry if there are a few wrinkles in it, in fact a few wrinkles make it a bit better.

Drill four 3mm holes dotted about in front of each eye, and push the LEDs through so that they just protrude into the goggles. Distribute the colours evenly for each eye. Now take some epoxy resin and fix the LEDs with a little glue on the outside and, when set, paint round them so no light gets in. Cut the leads from LEDs off close to the body and wire up using thin wire to a piece of 9-way ribbon cable attached to one side of the goggles.

Mount the resistors directly onto the appropriate pins of the 25-way plug and attach the ribbon cable to the other end of the resistors. In Figure I the parts mounted on the goggles are shown enclosed in a dotted box. Make sure the ribbon cable is long enough to reach round the back of the computer and still allow you some degree of movement while wearing them.

If you wanted to make a really good job you could cut some printed circuit board to fit inside the goggles and use surface mounted LEDs, but that is a bit adventurous. Just a word of warning here, before you try the goggles on make sure the paint is really dry. I failed to notice that it was still slightly wet and when I removed them I had a line of black paint round my face – I got some odd looks.

You can test the wiring with my port monitor application, for those of you who missed it last time it's on the Acorn User Website. It powers up with the printer port in input mode so you first have to click the logic one in bit five of the control register to get it to be an output, then as you click each bit on the output port you should see the LED light up

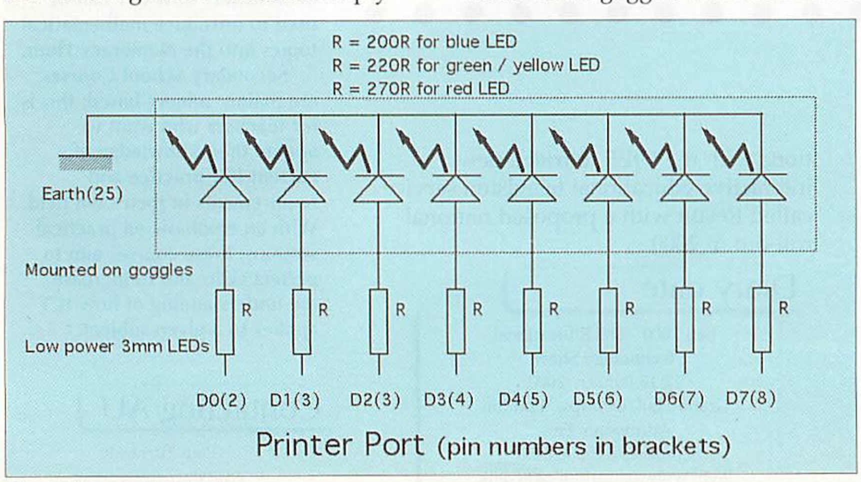



*Figure I: The electrical circuit*

when there is a logic one in the appropriate bit. If not, check your wiring and make sure that you have wired the LEDs the right way round. When they are new and have long leads the earth should be wired to the shorter of the two.

Now on to the software, it is perfectly possible to write some simple software to just turn the LEDs on and off in a random order. All you have to do is to generate a random number with a maximum of 255 and send it to the printer port. You also need a delay loop to stop you doing this too often otherwise it will look like they are all on at once. Such a simple program is on the cover disc called *Flash1*. It uses the system timer to change the flashing rate.

You don't need a bidirectional printer port to use this but if you don't have one you should load the module *mono_d* from the disc first. This is because the operating system doesn't recognise the port driver commands on a machine with an old printer port, my module rectifies this.

*Flash2* shows how we can define a sequence, the state of each light is stored in an array called Look% and then at each time-change the next pattern is output.

Notice how we don't have to specify how many steps we use in the sequence, the routine stops putting in data patterns when it finds a number bigger than is represented by all bits being set. This is 256 or &100, it's better to use hex as you can see more clearly the relationship between the bit pattern and the number.

However, we can be a little more adventurous than that and actually control the brightness of each LED in turn using no extra hardware. The secret of this lies in using a variable mark-space ratio signal to turn the LEDs on and off. The basic idea is shown in Figure II.

If we feed the LED with a signal that spends half it's time high and the other half low you might expect to see the light flash. However, if this signal changes fast enough the persistence of vision of the eye will make it appear to be on all the time but only at half the brightness. If we have a low mark-space ratio, that is the signal spends most of it's time low and only a short time high, the LED will appear dim. Conversely we get a bright LED the

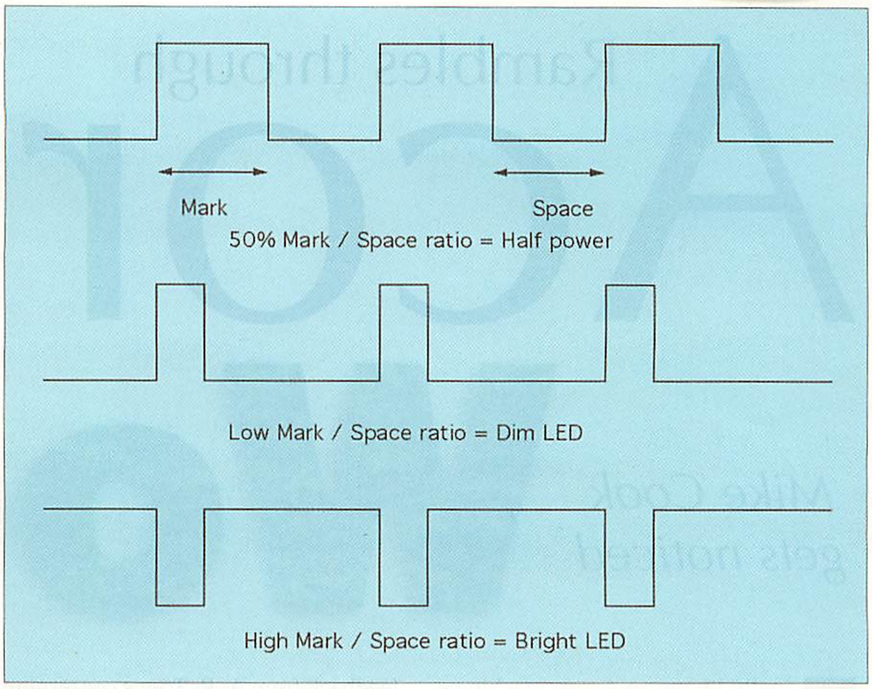



*Figure II: Altering the brightness with the mark/space ratio*

more time the signal spends high.

So what we need to do is to write a routine that will count how long an LED is on then turn it off and count how long it is off. To do this you need two constants and two variables, one constant is used to hold the maximum number of counts the LED is on for, the other to hold the off counts. Then the variables are used to hold the current count for that state.

Suppose the light is to be on for a count of 10 and off for a count of 10, when the routine is first entered the light will be turned on and the on-time constant will be transferred to the on-time variable. Next time the routine is called the on-time variable will be decremented and the light will still be on.

Subsequent calls decrement the variable until it reaches zero, the light will then be turned off and the off time constant transferred to the off time variable. This is decremented on each call to the routine until it reaches zero and then the light is turned on again.

On a Risc PC with a StrongARM processor BASIC is just about fast enough for this without you being able to see flicker, but as each of the eight LEDs will need looking after like this we have to resort to machine code.

The storage locations for the variables and constants are in the area of memory before the code in a block of four for each LED: On constant, Off constant, On count, Off count. Now the rest of the program is a loop that keeps on calling this routine and occasionally times out to change the brightness.

When this is running if you wave the lights backwards and forwards quickly you will see the LEDs not as smears of light but dashes of light. The length of these dashes depend on how fast you wave the lights about and how fast they are flashing. This program is called *Flash3*

I did think of making this a multi-tasking program but the point is that you are supposed to be relaxed when this is happening, so the final program *Relax* blanks out the screen and plays random white noise at you. Alright, I admit that this bit of the software really needs improving as the noise sounds a bit like gunshots – not too relaxing.

What you really need is some pink noise, that is white noise with the spectrum peaking at the lower end. If you put noise through a band pass filter and vary its frequency you get a howling wind effect or a waves breaking on the shore, depending on how you move the filter.

## Warning

As a final point, some epileptics can have fits triggered by flashing lights and although the frequencies involved here are much higher than the trigger thresholds, if you do fit into this category you are probably best avoiding this project. **END**

# Rambles through Acorn Wood

*Mike Cook gets noticed*

Finally I have an Acorn machine on my desk at work, although now with two machines there's not much room for anything else. When Pace acquired Element 14, I was sent up to Saltair to help evaluate RISC OS, but as RISCOS Ltd have an exclusive licence to develop the operating system for desktop computers don't expect to see any from Pace. I think their interest lies mainly in the operating system for embedded processor systems and they may even port it for use with another processor.

Anyway that's by the by because its arrival on my desk has prompted quite a bit of comment from various quarters. Mainly along the line of "I didn't know they made modern computers" and "Oh, you're *that* Mike Cook". Anyway everyone has been quite impressed at the time it took me to knock together an infra-red transmitter that worked with a new encoding system we are looking to use.

Then the software was quickly modified to produce a zapper for our current OnDigital boxes, this played back a sequence of control key presses so we could do long term testing on them. So the computer is earning its keep. I did have a bit of trouble with it at first, the screen would go completely blank after about three minutes of operation. This was cured by removing the ethernet card from the machine as it wasn't connected to anything. Sadly however I don't think I have converted anyone else into using them. Let's start with some feedback from A. R. Triggs concerning Simon Lee's CD drive empty problem, he writes:

Q **"Being well known among colleagues and family as a person who can get any software to malfunction in normal use, I often get the error message 'drive empty' when trying to access a CD. As with many other peculiarities, this usually occurs after using the PC card. My normal fix is to click Menu over the CD icon, then select 'Dismount', (this seems to toggle between on and off).**

**"I first encountered this when I had the original motherboard and 610 processor. It has continued with a later board, and 200, then 233 StrongARM processors. The system then works normally. It only seems to reoccur on the odd occasion, but does tie up with PC card usage."**

A Thanks for that, it is a useful work around even though it doesn't completely fix the problem. Are you shutting the PC environment down properly I wonder?

The next bit of feedback comes from Richard Grant who remembers a reply I made to a letter asking about a project using a laser pointer, he writes:

Q **"In connection with the question and answer in your Rambles column of the July issue of *Acorn User*, I can provide small very high-quality front-silvered mirrors suitable for incorporating into laser lights. The glasses are about 22mm across, about a millimetre in thickness and only a couple of grams or so in weight. A coil of 40swg or similar wire should be hand-wound and glued to the back of the mirror with Araldite or similar.**

**"Ensure that the lead-in and lead-out wires are 180 degrees apart and suspend two such mirrors, one vertically and one horizontally near a strong bar magnet or better still, in the field of a large horseshoe magnet. Shine your laser onto the mirrors so the beam bounces off both mirrors. Feed the coils with a suitable AC voltage and hey presto, a laser light display.**

**"I am no physicist but would imagine that a suitable program could weave all sorts of interesting shapes. This I leave to you. I have a small supply of these mirrors which I can supply in pairs for £12 per pair, all inclusive. I can order further supplies but my suppliers will supply only in quantities of 125 or above. In the meantime, it's first come, first served until current stocks are exhausted. Contact me at richard.grant@dial. pipex.com"**

A Thanks Richard that certainly sounds interesting but I suspect that the mechanical part might be tricky to do. Now I have left Manchester Met university I don't have access to a workshop so I am a bit reluctant to take on this project. Also the mirrors will need mounting with some material with a bit of a twist restoring force. A thin steel wire might be fine but how would the

magnetic field affect this? Maybe it needs to be of some other material. As you say I can foresee the electronic side of things presenting no problem, just two latching D/A converters on the printer port connected to a driver amplifier. The software could then just step through a look-up table and shunt values to the D/As at regular intervals. If anyone could come up with a suitable mechanical design I am sure we could sort out a joint article.

Neil Rodger who signs himself G4RQN says:

Q **"I have an A3000 running RISC OS 3.10. My problem is that I want to build an adaptor to fit a normal 'podule' to the Mini Expansion Card's socket. The podule socket on the rear is needed for a hard drive. "The normal podule that I want to fit is a simple one (it isn't one that shows up when I type *podules and it's sole purpose in life is to do something called Slow Scan TV). Can you help with the adaptor connections/circuit please?"**

A I know about slow scan TV, there was an article about it in the October '98 *Acorn User* and besides I am G8HBR and designed a lot of slow scan stuff back in the mid 70's. Anyway I did look at making an A3000 internal module fit a normal podule slot for a MIDI interface card you can get it on the net from:http://www.doc.mmu.ac.uk/ Physics/Acorn/articles/ RTR1995/RTR9

In the article I think I referred to the socket numbers on the internal module, in the table below I have changed them to match the socket numbers in the A3000 manual (those on the board). Pin 1 is at the righthand end when viewed from the front of the computer. Also note that the A3000 does not have any -5V or +12V supply and if your podule needs this then you are stuck. As the internal expansion is only a subset of the main podule signals there might be signals that you need on the podule but haven't got on this list.

Electrically it's simple enough to wire them up, but you might have a bit of a problem with the physical layout. Also remember that some of these lines carry high speed signals so you run the danger of introducing interference and distortion if they are not kept as short as possible. Best of luck with the project – I think you will need it.

## Interface wiring table

| AKA12 | Name | Euro Card |
|---|---|---|
| *SK11 pin* | | |
| 3 | /PRE | 15c |
| 4 | PR/W | 13c |
| 5 | LA[4] | 13a |
| 6 | LA[5] | 12a |
| 7 | LA[6] | 11a |
| 8 | LA[7] | 10a |
| 10 | LA[8] | 9a |
| 11 | LA[9] | 8a |
| 12 | LA[10] | 7a |
| 13 | LA[11] | 6a |
| 14 | LA[12] | 5a |
| 15 | LA[13] | 6a |
| 16 | /PIRQ | 16c |
| *SK3 pin* | | |
| 2 | /PWE | 14c |
| 3 | /Ps1 | 22c |
| 4 | CLK2 | 27c |
| 5 | LA[2] | 15a |
| 6 | LA[3] | 14a |
| 7 | BD[0] | 31a |
| 8 | BD[1] | 30a |
| 9 | BD[2] | 29a |
| 10 | BD[3] | 28a |
| 11 | BD[4] | 27a |
| 12 | BD[5] | 26a |
| 13 | BD[6] | 25a |
| 14 | BD[7] | 24a |
| 15 | /RST | 12c |

Power connections:-0 volts :- SK11 pins 1, 9 & 17, SK3 pin 16, Euro Card pins 1a, 1c, 3c, 4c, 26c 5 volts :- SK11 pin 2, SK3 pins 1, 17, Euro Card pins 30c & 32a

Chris Grant wants to upgrade his hard drive capacity:

Q **"I wonder if you might be able to help me out here. It's my harddisc. It's currently residing in a old and friendly A5000 which I use almost daily, but I'm now finding that its 40Mb just isn't cutting the mustard any more. It's getting to the stage where I've got so many floppy discs that I have to shovel my way to the keyboard.**

**"I understand that I can easily buy a 3.5in IDE harddisc with oodles of storage space, but I am a little confused over the interface situation. Most of the drives have two price columns, one with and one without the interface, with an appropriate price difference, yet I'm still not sure I actually need it. "My guess is that if I simply replace my old harddisc with a new one I don't need a new interface, but if I wanted it as a second drive then I would?**

**"I hope I'm not insulting your intelligence by asking such a trivial question, but I'm on a very limited budget here and I don't want to make a mistake. I can't wait to get rid of my floppies."**

A Well the first computer, I had with a harddisc had a staggering capacity of 5Mb, mind you that was when a floppy held 100K. As Marvin from 'The Hitchhikers Guide to the Galaxy' said "I don't know how anyone can live in anything so small".

Yes, if you just want to replace the drive go ahead and get a replacement, although if you get a drive bigger than 2Gb you are best partitioning it into smaller drives so you will need to pay for some partition software. For an extra harddisc you will need an interface podule card as well. However remember that whatever size drive you choose it will probably be too small one day.

Finally Christopher Rayson has a problem with PC files to which I haven't got a solution, can any one help him?

Q **"Having carefully set up DOSMAP commands on my Acorn, I find that when loading DOS-format floppies files saved on PCs they still come up 'untyped'. Specifically, they tend to have type &x00. Occasionally – generally if I saved a whole directory of, say, /JPG files – one or two will have the correct file type (&C85), while the others appear &200, &500, &E00, and so on. Is this:**

- **a) supposed to happen, (is the DOSMAP set up wrong?);**
- **b) a known bug in ADFS;**
- **c) a problem with my machine (an A7000, RISC OS 3.60)**

**"I have an application, *CDFix*, which stops a similar problem in CDFS. Is there anything I can do?"**

A Answers on a postcard please to the usual editorial address, or the e-mail address shown below. END

## Contacting AU

Mike Cook:
rambles@acornuser.com







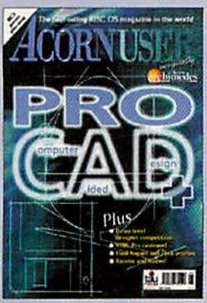
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# Bare minimum

While perusing the newsgroups the other day (specifically comp.sys. acorn.games) I came across a posting intimating that there is no way the Acorn machines will ever be able to compete with PCs when it comes to games.

At the moment I'd have to agree with that statement, but not with the statements about the Risc PC being *incapable* of performing as a gaming machine.

The post went on to say that modern gamers wouldn't settle for anything less than games such as *Nocturne*. Intrigued I decided to search out the demo and have a look at it. There are times when a University Internet connection is a godsend. One 109Mb download later I'd got a demo of a game some people would class as the 'bare minimum' we should expect of all modern games. After unpacking the demo I checked the *Readme.txt* file which lists the minimum spec of machine required:

- Windows 98, Windows NT 4.0, or Windows 2000
- Pentium 2, Celeron, Pentium 3 or AMD Athlon CPU
- 128Mb System RAM
- Sound Blaster Live! for environmental audio effects
- Matrox G200/G400, ATI Rage 128, S3 Savage 3D, or TnT/TnT2 for 3D acceleration
- 200Mb of free harddisc space
- 200Mb of free virtual memory

I thank forward planning that the five month old machine I work on is a P3x500MHz with 128Mb of System RAM, 13Gb drive, Sound Blaster 128 with a 16Mb TNT video card.

Running the demo allows you to enter the options setup. It seems you need a 32Mb video card to use any resolution above 640x480. Having set everything up the way I'm used to I started the game and a minute later, still initialising the triangle data, it fell flat on its face. "No room for triangle data at ....".

Quitting all other apps and trying again yielded the same result. I tried rebooting and from a clean machine with much of the graphic detail turned down to minimum – the same error occured.

Well, if that's the baseline that all future games will need to meet then I, for one, won't be buying any of the newer games releases (leastwise not until I have a 256Mb RAM machine with 4th generation video card sporting 128Mb of VRAM) and it seems a little preposterous to expect the Risc PC to have to compete in such an arena!

*Glyn Royds, by e-mail*

## Charity-boy rides again

The next planned charity fund raising event that I'm organising is to help Steve Turnbull's MENCAP bike ride in China. What is intended will be very nice if it can be pulled off: I am planning on releasing a double CD containing all of the Acorn FTP sites, but I've run into a problem.

Having spoken with Malcolm at Demon (the chap who looked after the Acorn FTP site there), he says that some of the software has conditions on it saying that they are for Internet use only and not to form any part of a CD. This may put a spanner in the works unless you can help.

If you have released any software to any of the following FTP areas, please contact me as soon as possible (and I mean soon) saying if I can or can't use the software on these charity CDs – this applies equally to those who have this rider on their software and those who don't – also if you know someone who has done this (but maybe won't have read this) please ask them to reply to me. The FTP sites are:

- Argonet
- Demon
- HENSA
- Uni of Stuttgart
- Cybervillage
- Barnet
- Avogadro (Chris Johnson)
- ARM Club

Any of the areas held on the acornusers.org (CBSA, Emulators, SkullSoft and so on).

Should I get the green light, the CDs could be out before Christmas with a recommended minimum donation of £12.50 – just double the price of the Kosovo CD.

Please help.

*Paul F. Johnson*
*E-mail: paulf.johnson@ukonline.co.uk*

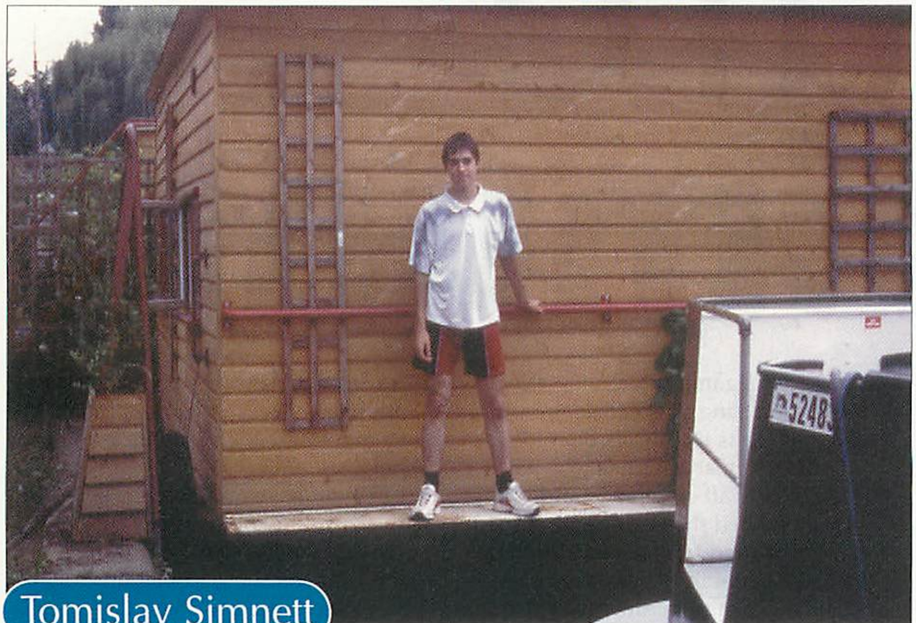
## Out of the closet

Now that our leader, Tony, has come out of the closet and admitted that he is a computer illiterate, it is no longer so surprising that one of his first guests at No 10 was Bill Gates. I wonder what they could have talked about. The weather perhaps?

Rather than consult with the author of so many of the problems that now face computer users, the government should have taken advice from companies such as Acorn and boosted UK industry.

The impact on employment could, however, have been negative as there would be less need for the armies of consultants that make a good living, while they stay sane, installing and fixing Windoze programs. There would also be less need for tutors for the Prime Minister (at least in Information Technology).

*Dave Barnett, by e-mail*



Tomislav Simnett

A love of Acorns frequently runs in the blood. This column itself has covered a number of family pairings: the Streater, Finn and Simpson brothers. Now there's a father/son pairing to add to the list. Back in Christmas 1995 Mark Moxon interviewed John Simnett of Simnett Computing and Cumana; I'm now talking to his son Tomislav. I met Tomislav the day before his GCSE results came out, which he was very relaxed about, but then he would be because already Tomislav is the Managing Director of Simnett Computer Services.

> Being 16 it is not easy to get every-thing sorted out

"I have just become an Acorn dealer," says Tomislav excitedly. "I just phoned up CTL and said: 'I want to become a dealer' and they said 'fine' – it was as easy as that. My father was desperately trying to tell me not to go through with it because it would not work so I told him 'Yeah, it will'.

"The problem is with the banks and everything. Being 16 it is not easy to get everything sorted out. It is easy enough to open an account up, but everything else is as hard as anything. I cannot borrow until I am 18. I am going to be selling mail order; it should work out. If anyone wants a computer I'm here."

Tomislav's company is not only selling computers, but also computer training and Website design. He uses PCs if people want training on them, as it makes good business sense. But Tomislav is really Acorn born and bred.

"I have being using computers since I was god knows how young. As far as my parents are concerned I was tapping away at keyboards just hitting keys when I was six months old at our old shop. As far as I am concerned I have been using them properly since I was about three. The old BBC, Spectrum, Atari – you name it, I've used it. My love of Acorns stems from using them so much and not liking what the PC had to offer. I do have a computer-led life."

Tomislav got into Web design through writing his own pages. He gained commercial experience while doing work experience at Atomwide. Since then it has snowballed and Tomislav is getting requests from all sorts of businesses; even his dad may want him to do a page, although Tomislav is keen to stress that his father has nothing to do with his company.

"I don't use *FrontPage*, nothing to do with a PC," Tomislav says emphatically. "I do have a PC but that's for training on, and that is because there are so many people who want it and I can get the income. I also get to show PC people how wonderful Acorns are and offer them my complete Acorn solution. On the other hand everything I actually do is done on the Acorn. I have a couple networked together in my room.

"I use *StrongED* – it's the best. I tried using *Zap* but I am not too keen; *Edit* is absolutely awful. I also use *Photodesk* version 1 – I cannot afford to buy the latest version yet – *Paint*, *ChangeFSI*, *InterGIF* and other bits and pieces."

Tomislav lives in one of the coolest places I've visited: a house boat on the Thames. He says he could not live in a normal house ever again, and I understand totally. On the wall of his bedroom I notice an unusual decoration, a bike. I find out he is not just content with having his own company.

"One of my big aims at the moment is to be a professional cyclist, but I know it might not turn out. I have problems with my back and I have to sort them out, then I will join a cycle club. The Pro tour this year in May started off by doing 72 laps around Westminster and they did 800 miles in seven days. I cycled to Cornwall to see the eclipse and I did 300 in four days. It hurt but it is meant to. I was crying. I was on my own and I had no slipstream to cycle in. What motivated me was that I got to Black Bush airport and thought 'Yes! I am nearly home,' and so cycled the last part at 25 miles per hour."

As we chat about the pros and cons of a house boat (which is now gently floating, the tide having come in), I reflect that the future of the Acorn market depends in many ways on people like Tomislav, people who refuse to see that it's just plain *silly* to cycle to Cornwall and back just to see the moon pass in front of the sun.

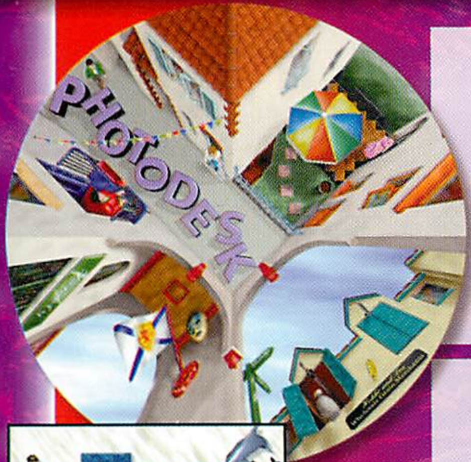
**Jill Regan**

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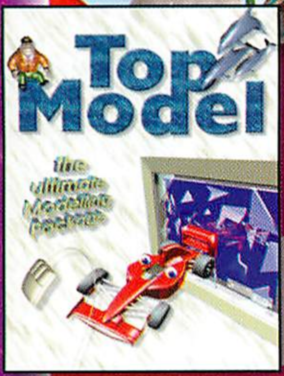
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